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Application Serial Number: 09/724/26Source: 0//EDate Processed by STIC: 12/7/2000

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FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216. PATENTIN 2.1 e-mail help: patin21help@uspto.gov or phone 703-306-4119 (R. Wax) PATENTIN 3.0 e-mail help: patin30help@uspto.gov or phone 703-306-4119 (R. Wax)

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE <u>CHECKER</u> <u>VERSION 3.0 PROGRAM</u>, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW:

## **Checker Version 3.0**

The Checker Version 3.0 application is a state-of the-art Windows based software program employing a logical and intuitive user-interface to check whether a sequence listing is in compliance with format and content rules. Checker Version 3.0 works for sequence listings generated for the original version of 37 CFR §§1.821 – 1.825 effective October 1, 1990 (old rules) and the revised version (new rules) effective July 1, 1998 as well as World Intellectual Property Organization (WIPO) Standard ST.25.

Checker Version 3.0 replaces the previous DOS-based version of Checker, and is Y2K-compliant. Checker allows public users to check sequence listings in Computer Readable form (CRF) before submitting them to the United States Patent and Trademark Office (USPTO). Use of Checker prior to filing the sequence listing is expected to result in fewer errored sequence listings, thus saving time and money.

Checker Version 3.0 can be down loaded from the USPTO website at the following address: http://www.uspto.gov/web/offices/pac/checker

SERIAL NUME

## ERROR DETECTED SUGGESTED CORRECTION

ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE The number/text at the end of each line "wrapped" down to the next line. Wrapped Nucleics This may occur if your file was retrieved in a word processor after creating it. Please adjust your right margin to .3, as this will prevent "wrapping". The amino acid-number/text at the end of each line "wrapped " down to the next line. Wrapped Aminos This may occur if your file was retrieved in a word processor after creating it. Please adjust your right margin to .3, as this will prevent "wrapping". The rules require that a line not exceed 72 characters in length. This includes spaces. Incorrect Line Length The numbering under each 5th amino acid is misaligned. This may be caused by the use of tabs Misaligned Amino Acid between the numbering. It is recommended to delete any tabs and use spacing between the numbers. Numbering This file was not saved in ASCII (DOS) text, as required by the Sequence Rules. Non-ASCII Please ensure your subsequent submission is saved in ASCII text so that it can be processed. Sequence(s) \_\_\_\_\_ contain n's or Xaa's which represented more than one residue. Variable Length As per the rules, each n or Xaa can only represent a single residue. Please present the maximum number of each residue having variable length and indicate in the (ix) feature section that some may be missing. A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid Patentin ver. 2.0 "bug" \_. Normally, Patentin would automatically generate this section from the previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to the subsequent amino acid sequence. This applies primarily to the mandatory <220>-<223> sections for Artificial or Unknown sequences. missing. If intentional, please use the following format for each skipped sequence: Skipped Sequences Sequence(s) (2) INFORMATION FOR SEQ ID NO:X: (OLD RULES) (i) SEQUENCE CHARACTERISTICS:(Do not insert any headings under "SEQUENCE CHARACTERISTICS") (xi) SEQUENCE DESCRIPTION:SEQ ID NO:X: This sequence is intentionally skipped Please also adjust the "(iii) NUMBER OF SEQUENCES:" response to include the skipped sequence(s). Sequence(s) \_\_\_\_ missing. If intentional, please use the following format for each skipped sequence. Skipped Sequences (NEW RULES) <210> sequence id number ₹400> sequence id number 000 Use of n's and/or Xaa's have been detected in the Sequence Listing. Use of n's or Xaa's (NEW RULES) Use of <220> to <223> is MANDATORY if n's or Xaa's are present. In <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents. \_ are missing this mandatory field or its response. Use of <213>Organism (NEW RULES) Use of <220>Feature are missing the <220>Feature and associated headings. Use of <220> to <223> is MANDATORY if <213>ORGANISM is "Artificial" or "Unknown" (NEW RULES) Please explain source of genetic material in <220> to <223> section. (See "Federal Register," 6/01/98, Vol. 63, No. 104, pp. 29631-32) (Sec. 1.823 of new Rules) Please do not use "Copy to Disk" function of Patentin version 2.0. This causes a corrupted Patentin ver. 2.0 "bug" file; TeSalting in missing mandatory numeric identifiers and responses (as indicated on raw sequence tisting).

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OIPE

RAW SEQUENCE LISTING DATE: 12/07/2000 PATENI APPLICATION: US/09/724,126 TIME: 07:57:43

Input Set : A:\35966aseq.txt
Output Set: N:\CRF3\12072000\I724126.raw

Does Not Comply
Corrected Diskette Needed

4 <110> APPLICANT: Han. Hui-Quan

Kwak, Keith

7 <120> TITLE OF INVENTION: Human E3 Alpha Ubiquitin Ligase

9 <130> FILE REFERENCE: 01017/35966

11 <140> CURRENT APPLICATION NUMBER: US/09/724,126

12 <141> CURRENT FILING DATE: 2000-11-28

14 <150> PRIOR APPLICATION NUMBER: US 60/187.911

15 <151> PRIOR FILING DATE: 1999-03-08

17 <160> NUMBER OF SE0 1D NOS: 29

19 <170> SOFTWARE: Patentin Ver. 2.0

## ERRORED SEQUENCES

508 <210> SEQ ID NO: 2 509 <211> LENGTH: 1749 510 <212> TYPE: PRI 511 <213> ORGANISM: Homo sapiens 513 <400> SEQUENCE: 2 514 Met Ala Asp Clu Glu Ala Gl; Cly Thr Glu Arg Met Glu Ile Ser Ala 10 517 Glu Leu Pro Gla Thr Pro Gla Arg Leu Ale Ser Trp Trp Asp Gla Gla 518 25 25 30520 Val Asp Phe Tyr Thr Ala Phe Lou His His Leu Ala Glu Leu Val Pro 521. 35 40 523 Glu Tie Tyr Phe Ala Giu Met Asp Pro Asp Leu Glu Lys Glm Glu Glu 524 50 5.5 60 526 Ser Val Glm Het Ser ile Phe Thr Pro Leu Glm Trp Tyr Leu Phe Gly 7.0 75 ⋅ 529 Glu Asp Pro Asp IIe Cvs Leu Glu Lys Leu Lys His Ser Gly Ala Phe 90 532 Gln Leu Cys Gly 4ra Val Phe Lys Ser Gly Glu Thr Thr Tyr Ser Cys 105 535 Arg Asp Cys Ala 14e Asp Pro für Cys Val Leu Cys Met Asp Cys Phe 536 115 120 125 538 Gln Asp Ser Val His Lis Ash His Arg Tyr Lys Met His Thr Ser Thr 1 15 541 Gly Gly Gly Phe C,s Asp C,s Gly Asp Thr Glu Ala Trp Lys Thr Gly 542 145 150 150 150 544 Pro Phe Cys Va. Ash Ris Glu Pro Gly Arg Ala Gly Thr Lie Lys Glu 165 170 547 Asn Ser Arg Cys Pro Leu Asn Glu Glu Val Ile Val Gl $\eta$  Ala Arg Lys 548 180 185 190 550 Ile Phé Pro Ser Val Ile Lys Ter Val Val Glu Het Ihr Ile Trp Glu 551 195 200 553 Glu Glu Lys Glu feu Pro Pro Glu Leu Gln fle Arg Glu Lys Asn Glu 210 215 220

RAW SEQUENÇE LISTING
PATENT APPLICATION: US/09/724,126

DATE: 12/07/2000 TIME: 07:57:43

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	225 Val	He	Tyr	ser	Leu		Arg	Ala	Leu	Asp		G l.u	ī.eu	Ala	Glu	
560			-		215					250		*			255	
562 563	Gln	Leu	His	Thr 260	Thr	Ala	Ile	Asp	Lys 265	Glu	Gly	Arg	Arg	Ala 270	Val	Lys
	Ala	Gly	Ala	lyr	Ala	Ala	CVS	Gln		Ala	LYS	Glu	ASD		Lvs	Ser
566			275					280					285			
	His		Glu	Asn	Val	ser		His	Pro	Leu	His		Glu	Val	Leu	His
569		290					295	1	nh	. 1 -	tan	300		C1		m
572	305	GIII	116	Met	A14	510	GIB	Lys	Phe	Ald	315	ALG	Leu	61	361	320
		Acn	Lve	He	Mot		tur	Ser	Sor	Asn		Ara	Glo	τie	Pho	
575	ne c	азд	Lys		33	.,с1		50.2	<b>.</b>	330		9	<b>4</b>	•••	335	0,5
	G1n	Ala	Cvs	Len		Clu	Glu	Pro	·Asp		Glu	Asn	Pro	Cvs		He
578			- , -	340	•				345					350		
589	Ser	Arg	Leu	Met	Len	Trp	Asp	Ala	Lys	Leu	Tyr	Lys	Gly	Ala	Arq	Lys
581		-	355					360					365			
583	$_{11e}$	Leu	His	G1:i	Leu	He	Phe	Ser	ser	Phe	Phe	Met	Glu	Met.	Glu	Tyr
584		370					375					380				
		Lys	Leu	Phe	èla		Glu	Phe	Va l	Lys		туr	Lys	Gln	Leu	
587	385		_			390	_		_		395		_			400
	Lys	Glu	Tyr	He		Asp	Asp	His	Asp		Ser	He	ser	He		Ala
590					105		71 k	111	0	410		.1.			415	. 1
593	Leu	ser	vaı	Gin 420	Meri,	ine	inr	A 3 1	425	1111	ı.eu	Ald	WI d	430	r.eu	116
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596	0.111	1,3 1,41	435	71.711	• • • •	• • •		440		• • • • •			445			
	Len	Pro		r, :	100	7.SD	Ara		Asn	Lys	Phe	Asn		Gln	Glv	Ivr
599		450		• • •			155			•		460				
601	ser	Gin	Asp	1. '5	Line	GIV	Arg	Val	Tyr	Λla	Va I	116	Cys	Asp	Leu	Lys
602	465		-			470					475					480
604	Iyr	He	I.eu	11.0	sar	178	Pro	Thr	He	Trp	Thr	Glu	Arg	Leu	Arg	Met
605					185					490					495	
	Gln	Phe	Leu	· : ! ii	.i	Pho	Arg	Ser		Leu	Lys	11e	Leu		Cys	Met
608		_		5.10					505					510		
	Gln	Gly		Gla	Glu	110	Arg		Gln	Val	GLY	Gln		He	Glu	Val
611		0	515					520	11-	11.5	C1 =	Mat	525			
614	ASP	530	ASP	Trp	(111)	* 1.3	535	114.	Ald	116	CHI	540	GIII,	red	Lys	ASD
6.16	r 1 as		Lan	Het	D has	1115		Trn	five	Δla	Cve		Glo	Clu	1	Lan
617	545	i.eu	Lea	141. (		550	1114	117	C;3	71.0	555	пэр	GIG	Giu	· t.e.u	560
614		Val	Ala	177	LVS	Gla	C''S	His	LVS	Ala		Het	Arg	Cvs	Ser	
620					565				-, -	570			,		575	
622	ser	Phe	He	See	SHE	ser	Lis	thr	Val	Val	Gln	ser	Cys	Gly	His	ser
623				580					585					590		
625	Leu	$_{\rm G1u}$	Thr	$L_{\mathcal{F}}S$	See	1/r	Arg		ser	G1u	Asp	Leu	Val	Ser	11e	His
626		•	595					600					605			
628	Leu	Pro	Leu	ser	Arg	Int	Leu	Ala	Gly	Leu	His	Val	Arg	Leu	Ser	۸rg

RAW SEQUENCE LISTING PATENT APPLICATION: US/09/724,126

DATE: 12/07/2000 TIME: 07:57:43

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629	610						,, ; <sub>=</sub>	C1	rab co	irai		nha	C1	3.00	nha
631 Leu	GIY	Ald	V41	SCI		Leu	1115	Giu	PHE	635	301	PIIC	ULU	ush	640
632 625		- 1			630	a1	•			-, -	Cua		v. 1	100	
634 Gln	Val	GLU	vai		vai	GIU	lyr	PFO		ard	Cys	i.eu	val		Val
635			_	545					650					655	
637 Ala	Cln	Val		Ala	GLII	MeL	trp		Arg	ASI	CIA	Leu		Leu	110
638			:.60					665					670		
640 Ser	Gln		Phe	Tyr	Tyr	Gln		Val.	Lys	Cys	Arg		Glu	Met	T/T
641		675					680					685			
613 Asp	Lys	Asp	110	Hle	Met.	Leu	Gin	11c	GLÿ	Ala		Leu	Met	Asp	Pro
644	690					695					700				
646-Ash	Lys.	Phe	Leu	Leu	Len	Val	1.60	Gln	Arg	1∵r	Glu	I.eu	Ala	Glu	Ala
647 705					716					715					720
649 Phe	Asn	Lys	Thr	116	Ser	Thr	Lys	Asp	Gln	Asp	t.eu	He	Lys	Cln	Tyr
650				125					730					735	
652 Asn	Thr	Leu	11e	Glu	Glu	Met	Leu	Gln	Val	Leu	Tle	Tyr	He	Val	Gly
653			- 40					745	•				750		
655 Glu	Arq	ivr	Val	Pro	GIV	Vai	CIY	Asn	Val	Thr	Lys	Glu	Glu	Val	Thr
656		755			•		60				•	765			
658 Met	Ara	Glu	11.	He	His	Leu	L.·u	Cvs	He	Glu	Pro	Met	Pro	His	Ser
659	770	020				775	-				780				
661, Ala		Δla	1.70	Agn	( e>11	Pro	Cla	Asn	C1u	Asn		Glu	Thr	Gly	Leu
662 785	116	niu		, t.,	740					795					800
664 Glu	tan	Val	(144	250		V 4 1	Ala	thr	Pho		Lvs	Pro	Gly	Va 1	
665	<i>r</i> ,511	(uı		805	** . **	• • •	771.03		810	.,.	2,.,		01,	815	<b>J</b> C.
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668	111.5	013	650	• ; •		,	,.	825	.,,,,,			-:.,	830	• •••	
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674		F		T1			C	5.50	A 1 ·	Dha		1	17.5.1	T10	A
676 Pro	Pro	Pro	PTO	PTO	976	Pint	CVS	ыо	A.I d	875	sei	Lys	Vai	116	880
677 865				•				<b>*</b>				7 h	ual	rub a	
679 Leu	ren	ASH	C) S	PASP	11.5	MAC	Net	171	116	ren	ALU	1111	Val	895	CIU
680								•		·* 1		a1			<i>(</i> 11
682 Arg	ALA	116		1111	asp	ser	asn		rrp	inr	Gru	617		reu	CID
683			44111		_			905	_				910		4. 1
585 Met.	Ala		HIS	110	Lea	Ald		0.17	Leu	Len	GLU		LYS	GIN	GIn
686		915					920					925	_		_
688 Leu		Lys	Ala	170	Clu		Glu	Va!	Ihr	Phe		Pho	Tyr	HIS	Lys
689	930					335					940			_	
691 Ala	Ser	Arg	* 4,11	GIY		Ser	Ala	Me t	Asn		Gln	Het	Leu	Leu	
592 945					950					955					960
-	Leu	Lys	5.1		Pro	GIn	Leu	GLu	_	Gln	Lys	Asp	Met.		Thr
695				765					970					975	
697 Irp	He	Leu		Hert	Fho	$\Lambda s \nu$	Inr		1.78	Arg	Leu	Arq		Lys	Ser
658		•	1. 51.1					985					990		
700 Cys	f.eu	Tle	Val	LIA	Thr	Ihr	ser	dly	ser	Glu	Ser	He	i.ys	Asn	Asp
701.		995				1	009				.1	005			

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DATE: 12/07/2000 TIME: 07:57:43

PATENT APPLICATION: US/09/724,126

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703 Glu lle Thr His Asp Lys Glu Lys Ala Glu Arg Lys Arg Lys Ala Glu 1015 1020 704 1010 706 Ala Ala Ang Leu His Arq Gln Lys Ile Met Ala Gln Met Ser Ala Leu E--> 707 025 1025 1030 1035 1040 709 Gin Lys Asn the Ile Glu Thr His Lys Leu Met Tyr Asp Asn Thr Ser 1050 710 1045 712 Glu Met Pro Gly Lys Glu Asp Ser Ile Met Glu Glu Glu Ser Thr Pro 713 1060 1065 1070 715 Ala Val Ser Asp Tyr Ser Arg He Ala Leu Gly Pro Lys Arg Gly Pro 716 1075 1080 1085 718 Ser Val Thr Glu Lys Glu Val Leu Thr Cys Ile Leu Cys Gln Glu Glu 1095 1100 719 1090 721 Glan Glu Val Lys 11e Glu Asn Asn Ala Met Val Leu Ser Ala Cys Val E--> 722 (105) 1105 1110 1115 1120 724 GIn Lys Ser Thr Ala Leu Thr Gln His Arg Gly Lys Pro Ile Glu Leu 1125 1130 727 Ser Gly Glu Ala Lou Asp Pro Leu Phe Met Asp Pro Asp Leu Ala Tyr 1145 1150 728 1140 730 Gly Thr Tyr Thr Gly Ser Cys Gly His Val Met His Ala Val Cys Trp 1165 731 1155 1160 733 Gln Lys Tyr Phe Glo Ala Val Gln Leu Ser Ser Gln Gln Arg Ile His 734 1170 1175 1180 736 Val Asp Leu Phe Asp Leu Glu Ser Gly Glu Tyr Leu Cys Pro Leu Cys E--> 737 (185) 1185 1190 1195 1200 739 Lys Ser Leu Cys Asn Thr Val Tie Pro Tie Tie Pro Leu Glin Pro Glin 740 1265 1210 1215 742 Lys Tie Ash Sor Gin Ash Ala Asp Ala Leu Ala Gin Leu Leu Thr Leu 743 1220 1225 745 Ala Arg Trp 110 Gin th: Val Len Ala Arg Ile Ser Gly Tyr Asn Ile 746 1235 1246 1245 748 Arg His Ala L's Giv Gin Ash Pro Ile Pro Ile Phe Phe Ash Gin Gly 749 1250 1255 1260 751 Mer Gly Asp Ser thr Lou Glu Phe His Ser Ile Leu Ser Phe Gly Val E--> 752 265 1265 1270 1270 1275 1280 754 Glu Ser Ser the the the the Ser Ash Ser He Lys Glu Met Val He Leu 755 (28) 1290 1295 957 Phe Ala Thr Thr The Tyr Arg Ile Gly Leu Lys Val Pro Pro Asp Glu 758 13(0) 1305 1310 760 Arg Asp Pro Arg Val Pro Het Leu Thr Trp Ser Thr Cys Ala Phe Thr 761 1315 1320 1325 763 The Gin Ala The Giu Aso Leu Teu Gly Asp Glu Gly Lys Pro Leu Phe 1335 1340 766 Gly Ala Leu Gli Ash Ari Gli His Ash Gly Leu Lys Ala Leu Met Gli E--> 767 345 1345 1350 1355 1360 769 Phe Ala Val A. + Cln Arg He Thr Cys Pro Gln Val Leu He Gln Lys 1.00 1370 1375 772 His Leu Val A: : fou fou Ser Val Val Leu Pro Ash Ile Lys Ser Glu 773 • 1389 1385 1390 775 Asp Thr Pro Cys few lew Ser Tle Asp Lew Phe His Val Lew Vol Gly

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acid, 2.3. Ala spaul

Please ensure a spece of sets between last number and first letter of following amend acid. Po hat let numbers "run endo" next amend acid

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/724,126

DATE: 12/07/2000 TIME: 07:57:43

Input Set : A:\35966aseq.txt

output Set: N:\CRF3\12072000\1724126.raw

1400 1395 778 Ala Val Leu Ala Phe Pro Ser Leu Tyr Trp Asp Asp Pro Val Asp Leu 779 1410 . 1415 1420781 Clm Pro Ser Ser Val Ser Ser Ser lyr Ash His Leu Tyr Len Phe His E--> 78 425 1430 1435 1440 784 Leu Ile Thr Met Ala His Met Leu Gln Ile Leu Leu Thr Val Asp Thr 1145 1450 1455 787 Gly Leu Pro Lou Ala Gln Val Glu Glu Asp Ser Glu Glu Ala His Ser 788 1460 1465 1470 790 Ala Ser Ser Pho Pho Ala Glu 11e Ser Glu Tyr Thr Ser Gly Ser Ile 791 1475 1430 1485 793 GLy Cys Asp Ile Pro Gly Trp Tvr Leu Trp Val Ser Leu Lys Asm Gly 794 1490 1495 1500 796 Lite Thr Pro Ivr Lou Ara dys Ala Ala Leu Phe Phe His Tyr Leu Leu E--> 79 505 1510 1515 1520 799 GIV Val. Thr Pro Pro Glu Glu Leu His Thr Asn Ser Ala Glu Gly Glu 1525 1530 1535 805 Leu Phe Gln Glu Tyr Trp Asp Thr Val Arg Pro Leu Leu Gln Arg Trp 806 1555 1560 1565 808 Cys Ala Asp Pro Ala Leu Leu Ash Cys Leu Lys Gln Lys Ash Thr Val 1575 809 1570 8:11 Ver Arg Tyr Pro Ard Lvs Arg Ash Ser Leu Ile Glu Leu Pro Asp Asp E--> 810 585 1590 1595 1600 814 177 Ser Cys Leu Leu Ash Gin Ala Ser His Phe Arg Cys Pro Arg Ser 815 1605 1605 1615 817 Ala Asp Asp Glu Ard Lys His Pro Val Leu Cys Leu Phe Cys Gly Ala 818 1620 1625 1630 820 The Leu Cys Sor Gin Ash The Cys Cys Gln Glu The Val Ash Gly Glu 821 1635 1540 823 Glu Val Gly Ala Cvs The Phe His Ala Leu His Cvs Gly Ala Gly Val 1655 1660 824 1650 826 C/S | The Phe Lou Lys He Ard Win Cys Ard Val Len Val Clu Cly E--> 82 665 | 1670 | 1675 | 1680 Lys Ala Arg Gly Cos Ala for Pro Ala Pro Tyr Leu Asp Glu Tyr Gly 1685 - 1690 - 1695 -830 168, 832 Glu Thr Asp Pro GI, Lew Lys Arg Gly Ash Pro Lew His Lew Ser Arg 1705 1710 833 1700 835 Glu Arg Tyr Ari L/s Lou His Lea Val Irp Gln Gln His Cys Ile Ile 836 1715 1720 1725 838 Glu Glu Ile Ala Ary Sor Gla Glu Thr Ash Cln Met Leu Phe Gly Phe 839 1730 . 1735 E--> 841 200 Trp Gln 100 Leu

E--> 846 745

13 5-210> SEQ ID to 4 1336 <211> DENGTH 1757 1337 <212> TYPE: PRI 1338 <213> ORGANISM. Homo suprens

RAW SEQUENCE LISTING PATENT APPLICATION: US/09/724,126

DATE: 12/07/2000 `TIME: 07:57:43

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Output Set: N:\CRF3\12072000\1724126.raw

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1344	Leu	Glu	CVS	ser	Ala	Glu	Glu	11e	Ala	Gly	Lys	Trp	Leu	Gln	Ala	Thr
1345				.10					25					30		
1347	Asp	Leu	thr	Arq	ċ Lu	Val	lyr	Cln	His	Leu	Ala	His	Tyr	Val	Pro	Lys
1348			3.5				-	4 Ú					45			-
1350	He	Tyr	C7S	Arq	Glv	Pro	Asn	Pro	Phe	Pro	Gln	Lys	Glu	Asp	Het	Leu
1351		50		-	•		55					60				
1353	Ala	Gĺn	His	val	Lou	Leu	G17	Pro	Mert	Glu	Trp	lyr	Leu	Cys	Gly	Glu
1354	6.5					70	•				75					50
1356	Asp	Pro	Ala	ρ! <sub>1</sub>	GIV	Phe	Pro	Lvs	1.eu	Glu	Gln	Ala	Asn	Lvs	Pro	Ser
1357					85			•	•	90					95	
1359	His	Leu	Cvs	GIV	Arg	Va I	Phe	Lvs	Val	Gly	Glu	Pro	Thr	Tyr	Ser	Cys
1360			•	100				•	105					110		
1362	Arg	Asp	Cvs	Ala	Vai	Asp	Pro	Thr	Cys	Val	Leu	Cys	Met	Glu	Cys	Phe
1363		•	115					120	•				125		•	
1365	Leu	Gly		11e	His	Arq	ASD	His	Arq	Гуr	Arq	Met	Thr	Thr	Ser	Gly
1366		1.30				•	135			•	•	140				•
1368	Gly		G1∨	Phe	Cys	Asp	Cvs	G1 /	Asp	Thr	Glu	Ala	Trp	Lys	Glu	Gly
1369		;				150			•		155		•	•		160
1371		Tvr	Cvs	GIn	LVS	His	Glu	Leu	Asn	Thr	Ser	Glu	He	Glu	Glu	Glu
1372				-	165					170					175	
1374	Glu	Asp	Pro	Leu	Val	His	Leu	Ser	Glu	Asp	Val	He	Ala	Arq	Thr	Ivr
1375				150					185	•		•		190		-
1377	Asn	Lle	Phe	Ala	11.	Thr	Phe	Arg	Tyr	Ala	Va.l	Glu	Tle	Leu	Thr	Trp
1378			195				•	200	•				205			-
1380	Glu	Lvs	Glu	ser	Glu	100	Pro	Ala	Asp	Leu	Glu	Met	Val	Glu	Lys	Ser
1381		210					215		•			220			-	
1383	Asp	Thr	fyr	Lyr	C.s	Het	Leu	Phe	Asn	Asp	Glu	Val	His	thr	Tyr	Glu
1384	_		•	•	•	230					235					240
1386	Gin	Va1	He	Ivr	thr	Le-u	Gln	Lvs	Λla	Vül	Asn	Cys	Thr	Gln	Lys	Glu
1387					345					250					255	
1389	Ala	He	GIV	Pho	Ala	Thr	1hr	Val	Asp	Arg	Asp	G17	Arg	Arg	Ser	va!
1390			•	<u>.</u> ~					265					270		
1392	Arg	Tyr	Gly	<i>ksp</i>	PLe	GIB	Tyr	Cvs	Glu	Gin	Ala	Lys	Ser	Val	He	Val
1393		-	275					280					285			
1395	Arg	Asn	Thr	Seri	417	Gin	l li r	Lys	Pro	Leu	Lys	Val	Cln	Val	Met	His
1396	-	290					295					300				
1398	ser	Ser	11e	Val	Sea	His	GIn	Asn	Phe	Gly	Leu	Lys	Leu	Leu	ser	1rp
1399	305					+10					315					320
1401	Leu	Gly	Ser	1.0	He	Gly	Tyr	Ser	Asp	Gly	Leu	Arg	Arg	He	Leu	Cys
1402					3.25					330					335	
1404	Gln	Val	Gly	ien	Gla	G1a	Gly	Pro	Asp	Gly	Glu	Asn	Ser	ser	Leu	Val
1405				116					345					350		
1407	Asp	Arg	Len	Meet	! eu	Ser	Asp	ser	L;;s	Leu	Trp	Lys	Gly	Ala	Arg	Ser
1408	-	•	355					360					365			
1410	Va.t	Tyr	His	Gla	$i \cdots u$	Pho	MOL	ser	ser	T.eu	Leu	Mot	Asp	Leu	I.ys	Tyr
1411		370					375					386				

RAW SEQUENCE LISTING
PATENI APPLICATION: US/09/724,126

DATE: 12/07/2000 TÎME: 07:57:43

Input Set : A:\35966aseq.txt
Output Set: N:\CRF3\12072000\1724126.raw

	Lys	Lys	Leu	Pho	Ala		Arg	Phe	Ala	Lys	Asn 395	ryr	Gln	Gln	Leu	Gln 400
	385					390				_			_			
	Arq	Asp	Phe	Met		Asp	Asp	HIS	Glu		Ala	vai	ser	vai		Ala
1417					105	•				410					415	
1419	Leu	ser	Val	Cln	Phe	Phe	11: r	Ala		lhr	Leu	Ala	Arg		Leu	He
1420				420					425					430		
1422	Thr	Glu	Glu	ក់នាព	Leu	мет.	ser	11e	He	He	Lys	Thr	Phe	Met	Asp	His
1423			435					440					445			
1425	Leu	Arg	His	Arg	Asp	Ala	Gln	Cly	Arg	Phe	Gln	Phe	Glu	Arg	lyr	Thr
1426		450		, ,			155					460				
1428	Ala	Leu	Glo	Ala	Phe	Lys	Phe	Arg	Ara	Val	Gln	Ser	Leu	11e	Leu	Asp
1429						470		•	•		475					480
	Leu	1	1 27 8	Val	1	ila	Ser	1115	Pro	thr	Glu	Frp	Ser	Asp	Glu	Levi
1432		ح. ي.ت	.,.		485	- • •				490					495	
	Arg	r: Ln	1	L/1		610	Clo	[+loss	Act		Pho	Lean	Glu	1 411		Tive
1435		GIII		500	74.0	010		1 110	505		1 1		014	510		2,3
	Cys	Wat			More	2.00	14 ***	110		* ***	cln	Val	c1		uie	Da
			515	ur,	MC t.	кър	F. 0	520	: 111	My	UIII	vai	525	GIII	nis	110
1438					c	•	e 1		. 1	nha	m b -	T 211		Mark		*
	GLu		GIU	51.0	11111	irp	515	Ala	73 L (2	PHE	1 111	540	OLB	MHL	1. 7 S	ren
1441		530												•		•
	Thr	H 1.S	vai	1   +3	Set		Het	Gin	Asp	ırp		Ala	ser	ASP	G.I u	
1444			_			550					555		_			560
	Val	Leu	Ile	Glu		17:		LVS	Cys		VΤa	Val	Leu	Met		Cys
1447					565					570					575	
	His	GLY	Gly		thr	Veb	Giv	Glu		Pro	He	Thr	Leu		116	Cvs
1450				180					うわう					590		
	G17	His		Val	٠١	Thr	110		Tyt	CVS	Val	Ser		Glu	L7S	Val
1453			595					$f_{i}(t)g$					605			
1455	Ser	11e	His	Leu	LIC	Val		AAA	Leu	Lou	Alu	-		His	Val	Leu
1456		610					r-15			•		520	•			
1458	Leu	ser	Lys	sec	214	Va!	Ala	Tur	1.78	Phe	Pro	G1a	Leu	Leu	Pro	Leu
1459	625					6. +0					635					640
1461	Ser	$\tt Glu$	Leu	Ser	Pro	Pro	H••t.	Leu	He	Glu	${\tt His}$	Pro	Leu	Arg	Cys	Leu
1462					445					650					e55	
1464	Va1	Leu	Cys	1.24	Jim	Val	His	Ala	$GL_{\Sigma}$	Hel.	Trp	Arg	Arg	Asn	Gly	Phe
1465				náti					665					670		
1467	Ser	Leu	Val	ASB	-; i n	110	ivr	Tyr	Tyr	His	Asn	Val	L7S	Cys	Arg	Arq
1468		•	675					630	•				685	•		•
1470	Glu	мет.	Phe	Asp	j · q	ASI	V.i I	Val	He:	Leu	Glri	Thr	Gly	Va l	ser	Mart
1471		690			•	•	1,45					700	•			
1473	Me+1		Pro	asn	H . =	2110	1.000	146-1	110	Het	Len	Ser	Ara	Phe	Glu	i «>u
1474					••••	716	• • • •		• • •		715		,		,014	720
1475		Cin	Tle	uh	Sar		p.co	Agn	120	610		Ara	Phe	Spr	Ser	
1477	- 2 -		111	4 110	725			* > * > * } *	• • •	730	/3	*** 4	1 116	.,	735	., . (
1479	710	The	uic			4.54	0.1	Cin	cla		A	160	Lon	HA		C1
1480	7. 7. 6:	1111.	1113	3 7 6	177	*** :	101	57111	745	450	11211	1111	eu	750	STU	uiu
1482	Most	Lor	Time		: 10	12.5	11. 1	Lan		C11.	<i>(*</i> 1 1 •	۸	Dho		uro	· 1 · ·
	Me: L		755	7 (-1)			rv i	766	vu i	OTT	G I. U	ura		3CT	PIO	1117
1483									<b>~</b> 1			•	765			
1485	Val	GLV	GID	Voi	1.5.	Ala	1117	ASD	Giu	110	L S	ALU	ن ا u	ile	116	H 1.5

RAW SEQUENCE LISTING
PAILNI APPLICATION: US/09/724,126

DATE: 12/07/2000 TIME: 07:57:43

input Set : A:\35966aseq.txt
Gatput Set: N:\CRF3\12072000\1724126.raw

	1486		770					775					780				
	1488	Gln	Leu	ser	He	Lys	Pro	Met	Ala	His	Ser	Glu	Leu	Val	Lys	Ser	
	1489	785		•			79 U					795					800
	1491	Pro	Glu	Asp	Clu		L/s	Glu	fhr	Gly		Glu	Ser	Val	He		Ala
	1492					805					310			_		815	
	1494	Val	Ala	${\tt His}$	the	Lys	1.75	Pro	Cl:		Thr	Gly	Arg	Sly		ryr	CLu
	1495				820					825					830		
	1497	Leu	Lys	Pro	Giu	Cys	Ala	Lys		Phe	Asn	Leu	Tyr		Tyr	His	Phe
	1498			8 3 5					810					845			
	1500	ser	Arg	Alu	GIH	Gin	Ser		Ala	Glu	Glu	Ala	Gin	Arg	Lys	Leu	Lys
	1501		850					855					850				
	1503	Arq	GLn	Asn	${\rm Aro}$	Glu	Asp	Thr	Ala	Leu	Pro		Pro	Vai	Leu	Pro	
	1504						87 U					875					088
	1506	Phe	Cys	Pro	Leu	Phe	Aia	Ser	Leu	Val		He	Leu	Gin	Ser		Val
	1507					885					390					895	
	1509	Met.	Leu	CAR	110	Het	Giv	Thr	116		Gln	Trp	Ala	Val		His	Asn
	1,510				900					905					910		
	1512	Gly	lyr	Ala	Tip	ser	Giu	Ser		Leu	Gin	Arg	Val		His	Leu	11e
	15.13			915					920					925			
	1515	Gly	Het	Ald	Letu	GLa	G1u		Lys	GIn	His	Leu		Asn	Val	Thr	Glu
	1316		930					935					940				
	1518	GLu	His	.va i	Vai	ihr		lhr	Phe	Thr	Gln		He	Ser	Lys	Pro	
	1519						450					955					160
	1521	Giu	Ala	Pro.	1.78		Set	Pro	Ser	ile		Ala	Het.	Leu	Glu		Leu
	1522					11.					970					975	
	1524	Gln	Asn	Ala		I :	1 11	Glu	Val		Lys	Asp	Met	Ile		Trp	He
	1525				aii					985					990		
	1527	ren	Lys		1.11	Asin	Ala			t.vs	Mer.	yrq			Ser	Pro	Thr
	1528			995					1000					1005			
	1530	ser			Alu	1111			Gly	Thr	He			Glu	Ser	Ser	Arg
	1531		1010					015					020				_
	1533		Lys	Asp	I ''S			Arg	Lys	Arq			Glu	He	Λla		
>	1534	025	)				1030					L035					040
	1536	Arg	Arg	Gli.			Hot	Ala	Gin			Glu	Met	Cin			Pne
	1537					1915					1050					.055	
	1539	Tie	Asp				Glu	i.eu			Gin	Ihr	Leu			Asp	Ala
	1540				, west					1065					070		
	1542	ser			7.15	1 41 1	Leu			Ser	Pro	Val			Asp	Met	Thr
	1543			1075					080					1085			
	1545	Leu			1	C . •			Gln	Ihr	Gin			ÇTu	GIn	Arq	GIR
	1546		1090					095					100				
	1548			Th:		114	Leu	Cys	Glii	Glu	Glu	Gln	Glu	Val	1.75	Vai	Gtu
>	1549						1110			_,		1115					120
	1551	ser	Arg	Ala			: •• u	Ala	Ala			GIR	arg	Ser			reu
	1552					1125	_				1130	_		_	-	135	
	1554	Ser	Lys			21-1	ľ e	Phe			Asp	Pro	Giu			Asp	Pro
	1555				1140			_		145					150		_
	1557	I.eu			11.5	Pro	Asp			Cys	Giy	Thr			ser	ser	Cys
	1558			1155				- 1	160				1	165			

 RAW SEQUENCE LISTING
 DATE: 12/07/2000

 PATENT APPLICATION:
 US/09/724,126
 TIME: 07:57:43

Input Set : A:\35966aseq.txt

Output Set: N:\CRF3\12072000\1724126.raw

1560 Gly His Ile Met His Ala His Cys Trp Glu Arg Tyr Phe Asp Ser Val 1180 156.1 1170 1175 1563 Orn Ala Lws Glu Gin Arg Ard Gin Gin Ard Leu Ard Leu His Thr Ser E--> 1566 185 1190 1195 1200 1566 171 Asp Val Glu Ash Glv Glu Phe Leu Cys Pro Leu Cys Glu Cys Leu 1567 1205 1216 1215 1569 Ser Ash Thr Val Tie Pro Leu Leu Pro Pro Arg Ash Tie Phe Ash 1570 \$1220\$ \$1225 \$12301572 Ash Arg Leu Ash Phe Ser Asp Gln Pro Ash Leu Phr Gln Trp Ile Arg 1573 1235 1240 1245 1575 Thr Ile Ser Glm Glm Ile Lys Ala Leu Glm Phe Leu Arg Lys Glu Glu 1576 1250 1255 1260-1578 SET Thr Pro Ash Ash Ala Ser Ihr Lys Ash Ser Glu Ash Val Asp Glu
E--> 1578 (265) 1270 1275 1280
1581 Len Gln Leu Pro Glu Gly Phe Arg Pro Asp Phe Arg Pro Lys Ile Pro
1582 1285 1290 1295 1564 Tyr Ser Glu Ser He Lys Glu Met Leu Thr Thr Phe Gly Thr Ala Thr 1585 1300 1305 1310 1587 Tyr Lys Val Gly Leu Lys Val His Pro Asn Glu Glu Asp Pro Arg Val 1588 1315 1320 1325 1590 Pro Tle Met Cvs Trp Glv Ser Cys Ala Tyr Thr fle Glm Ser Hle Glu 1591 1330 . 1345 1340 1593 7 11e Leu Ser Asp Giu Asp Lys Pro Leu Phe Gly Pro Leu Pro Cys E--> 1594 345 1350 1355 1360 1596 Arg Leu Asp Asp Crs Feu Arg Ser Leu Thr Arg Phe Ala Ala Ala His 1597 136, 1370 1375 1599 Trp Thr Val Ald Ser Val Ser Val Val Gin Gly His Phe Cvs Lys Len 1600 1385 1602 Phe Ala Ser Leu Val Pro Asu Asp Ser His Glu Glu Leu Pro Cys Ile 1603 - 1395 - 1400 - 1405 1605 Leu Asp IIe Asp Mot Pho His Leu Leu Val Gly Leu Val Leu Ala Pho 1606 1410 1415 1420 1608 97 Ala Leu Gli Cys Gtn Asp Phe Ser Gly Ile Ser Leu Gly Thr Gly E--> 1606 429 1430 1435 1440 1511 Asp Leu His 110 Pho Has Lou Val Thr Mot Ala His Ile 110 Glm 11e 1612 1445 1450 1455 1614 Leu Leu Thr Ser Cos thr Giu Glu Ash Gly Met Asp Gln Glu Ash Pro 1615 1470 1470 1617 Pro Cys Glu Glu Glu Ger Ala Val Leu Ala Leu Tyr Lys fhr Leu His 1618 1475 1480 1485 1620 Glm Tyr Thr Gly Ser Ata teu Lys Glu fle Pro Ser Gly Trp His Leu 1621 1490 11+5 1500 1623 Fro Arg Ser Val Arg Ala Gly lle Met Pro Phe Leu Lys Cys Ser Ala E--> 162 50 1510 1515 1520 1626 Leu Phe Phe His Fr Leu Ash Gly Val Pro Ser Pro Pro Asp Ile Gln 1627 1535 1535 1629 Val Pro Gly th: Set His Phe Glu His Leu Cys Ser Tyr Leu Ser Leu 1630 1546 1550 1632 Pro Ash Ash Lea The Cys Leu Phe Gln Glu Ash Ser Glu The Met Ash

RAW SEQUENCE LISTING

DATE: 12/07/2000 TIME: 07:57:43

PATENT APPLICATION: US/09/724,126

Imput Set : A:\35966aseq.txt

Output Set: N:\CRF3\12072000\1724126.raw 1560 1555 1633 1635 Ser Leu Ile Glu Ser Irp Cys Arq Asn Ser Glu Val Lys Arg Tyr Leu 1636 1570 • 1575 1580 1638 Ch Gly Glu Arg Asp Ala (le Arg tyr Pro Arg Glu Ser Asn Lys Leu E--> 1639 (585) 1590 1595 1600 1641 Ash Leu Pro Clu Asp Tyr Ser Ser Leu ile Ash Gln Ala Ser Ash 1610 1605 16.15 1644 Phe Ser Cys Pro Lys Ser Gly Cly Asp Lys Ser Arg Ala, Pro Thr Leu 1645 1620 1625 1630 1647 Cys Leu Val Cys Gly Ser Leu Leu Cys Ser Gln Ser Tyr Cys Cys Gln 1648 1635 1640 1645 1650 Thr Glu Leu Glu Gly Glu Asp Val Gly Ala Cys Thr Ala His Thr Tyr 1651 - 1650 - 1655 - 1660 1651 1650 1653 Sec Cys Gly Ser Gly Val Glv Tie Phe Leu Arg Val Arg Ciu Cys Gin E--> 1656 669 1670 1675 1680 1650 Val Leu Phe Leu Ala Glv Lys thr Lys Gly Cys Phe Tyr Ser Pro Pro 1657 1685 1690 1695 1659 Tyr Leu Asp Asp Tyr Gly Giu Thr Asp Gin Gly Leu Arg Arg Gly Asn 1660 \$1700\$ \$17101662 Pro Leu His Leu Cys Lys Glu Ard Phe Lys Lys 11e Gin Lys Leu Frp 1663 1715 1720 1725 1665 His Gln His Ser Val Thr Glu Glu Ile Gly His Ala Gln Glu Ala Asn 1666 1.730 17-45 17-45 17-45 17-45 18-45 17-45 18-45 17-45 17-50 17-55 1 2155 <211> LENGTH: 1755 2156 <212> TYPE: PRT 2157 <213> ORGANISM: Mouse 2159 <400> SEQUENCE: 5 2160 Met Ala Ser Glu Met Glu Pro Glu Val Gla Ala Ile Asp Arg Ser Leu 2161 1 5 10 2163 Leu Glu Cys Ser Ala IIu Glu The Ala Gly Arg Trp Leu Gln Ala Thr 25 2166 Asp Leu Ash Ard Glo Val Ty: Olh His Lou Ala His Cys Val Pro Lys 2167 35 40 45 2169 The Tyr Cys Ard Gl, Pro Ash Pro Phe Pro Gln Lys Glu Asp Thr Leu 2170 50 2172 Ala Gin His He Leo Leo Gi; Pro Met Glu Irp Tyr He Cys Ala Gin 2173 65 70 75 80 2175 Asp Pro Ala Leu 31. Phe Pro Lys Leu Glu Glu Ala Ash Lys Pro Ser ۲٠. 90 2178 His Leu Cys Gly Ard Val Phe Lys Val Gly Glu Pro Thr Tyr Ser Cys 2179 100 105 110 2181 Arg Asp Cys Ala Vil Asp Pro Thr Cys Val Tou Cys Met Glu Cys Phe 2182 115 120 120 2184 Leu Gly Ser J.e His Are Asp His Are Tyr Are Het Thr Ihr Ser Gly 2185 + 130 115 140

2187 Gly Gly Gly Phe Cys Asp Cys Gly Asp Thr Glu Ala Irp Lys Glu Gly

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Input Set : A:\35966aseq.txt
output Set: N:\CRF3\12072000\1724126.raw

2188	145					150					155					160
2190		Tvr	Cys	Gln	Lys	His	Lvs	Leu	ser	ser	ser	Glu	Val	Val	Glu	GLu
2191		•			165		•			170					175	
2193	Glu	Asp	Pro	Leu	Va.l	His	i.eu	Ser	Glu	Asp	Val	He	Ala	Arg	thr	Tyr
2194		•		180					185					190		-
2196	Asn	.: l.e	Phe	Ala	11e	Met	Phe	Arq	Tyr	Ala	Val	Asp	He	Leu	Thr	trp
2197			195					200	•			-	205			
2199	Glu	Lys	Glu	Ser	Glu	Leu	Pro	Glu	Asp	Leu	Glu	Val	Ala	Glu	Lvs	Ser
2200		210					215					220				
2202	Asp	Thr	rvr	lvr	Cvs	Met	Leu	Phe	Asn	Asp	Glu	Val	His	Ihr	rvr	Glu
2203	-		•	•	•	230				-	235				_	240
2205	Gln	Val	11e	lvr	Thr	Leu	Gln	Lys	Ala	Val	Asn	Cys	Thr	Gln	Lys	Glu
2206					245			•		250		•			255	
2208	Ala	He	Glv	Phe	Ala	Thr	Ihr	Val	Asp	Arq	Asp	Gly	Arg	Arg	Pro	Val
2209				260					265	•	•	•	-	270		
2211	Arg	Týr	$G1^{\alpha}$	Asp	Phe	Gin	Tyr	Cys	Asp	Gln	Ala	Lys	Thr	Val	He	Vai
2212		-	275	•			•	280	•			-	285			
2214	Arq	Asn	Inr	ser	Arq	Gin	Ihi	Lys	Pro	Leu	Lvs	Val	Gln	Val	Met	His
2215		290					295	•			•	300				
2217	Ser	Ser	Vai	Ala	Ala	His	Gln	Asn	Phe	Glv	Leu	Lvs	Ala	Leu	Ser	frp
2218		•				310				•	315	•				320
2220		GIV	Ser	Val	He	GIV	lyr	Ser	Asp	GIV	I.eu	Arg	Arq	Lie	Leu	Cys
2221		•			125	•	•		•	330		•	•		335	•
2223	Gln	Val	Glv	Leu	Glu	Glu	Glv	Pro	ASP	GIV	Glu	Asn	Ser	Ser	Leu	Val
2224				340			•		345	•		•		350		
2226	Asp	Arq	Lei:	Mert	Leu	A36	Asp	ser	Lvs	Leu	Trp	Lys	Gly	Ala	Arg	Ser
2227			355					360	•		•	•	365		•	
2229	Val	Tyr	His	GIn	Leu	Phe	Met	Ser	Ser	Leu	I.eu	Met	Asp	Legu	Lvs	Tyr
2230		370					375					380	•		•	•
2232	Lvs	Lvs	Len	Phe	Ala	Lou	Arq	Phe	Ala	LVS	Asn	177	Arg	Gln	Leu	Gln
2233	385	•				390	•			•	395	•	-			400
2235	Arg	Asp	Phe	Met	Glu	Asp	Λsp	His	Glu	Arg	Ala	Val	Ser	Val	Thr	Ala
2236					105					410					415	
2238	Leu	Ser	Val	Gla	Phe	Phe	lhr	Ala	Pro	Thr	Leu	Ala	Arg	Het	Leu	Leu
2239				4.2t					425					430		
2241	Thr	Glu	Glu	ASI	ieu	Met	lhr	Val	He	tie	Lys	Ala	Phe	Met	Asp	His
2242			135					440					445			
2244	Leu	Lys	His	Arg	Asp	Ala	GIn	Gly	Arg	Phe	GLn	Pho	Clu	Arq	Tyr	thr
2245		150					155					460				
2247	Ala	Leu	Glu	7.1.4	Pho	1.8	Phe	Arq	Arg	Val	GIA	Ser	Leu	He	Leu	Asp
2248	165					474					475					480
2250	Leu	Lys	Tyr	Val	Leu	He	Ser	Lys	Pro	Thr	Glu	Irp	Ser	Asp	Glu	Leu
2251		•	•		485			•		490		•		•	195	
2253	Arg	GIn	Lys	Pno	Len	Gin	Gly	Phe	Asp	Ala	Phe	Leu	Glu	Leu	Leu	Lys
2254	-		-	Soi.			~		505					510		-
2256	Cys	Met	Gln	615	Het	Asp	Pro	He	Thr	Arg	Gln	Val	Gly	Glr	His	He
2257	-		5.15	-				520					525			
2259	Clu	иет.	GLu	Pro	Clu	Trp	Glu	Alu	Ala	Phe	Thr	Leu	Gla	Met	Lys	Leu
2000																
2260		5 3.0					535					540			-	

RAW SEQUENCE LISTING PATENT APPLICATION: US/09/724,126

DATE: 12/07/2000 FIME: 07:57:43

Input Set : A:\35966aseq.txt
dutput Set: N:\CRF3\12072000\1724126.raw

2262 2263	Thr 545	Nis	Val	1 Le	ser	Met 550	Val	Cln	Asp	Гrр	Cys 555	Ala	Leu	Asp	Clu	Lys 560
	Val	Len	[a] +4	Glu	Ala		LVS	LVS	Cvs	ı.eu	Ala	Val	Leu	Thr	Gln	Cys
2266			,	•	565		/		- • -	570					575	
	His	Gly	Glv	Phe	The	ASD	Gl∵	Glu	Gln	Pro	Ile	Thr	Leu	Ser	He	Cvs
2269				580					585					590		•
	G.l v	His	ser	Val	Glu	1hr	He	Arq	Tyr	Cys	Val	Ser	Gln	Glu	LVS	Val
2272			595					600	•	•			605		•	
2274	ser	He	His	Leu	Pro	He	ser	Arq	Leu.	Leu	Ala	Gly	Leu	His	Val	Leu
2275		610					×15					620				
2277	Leu	Ser	Lys	Ser	G1u	Val	Ala	Tyr	Lys	Phe	Pro	Glu	Leu	Leu	Pro	Leu
2278	625		-			5/10		-			635					640
2280	ser	Glu	Leu	ser	1.10	Pro	Met	Leu	ile	Glu	His	Pro	Leu	Arg	Cys	Leu '
2281					$9.4\mu$					650					655	
2283	Val	Leu	Cys	Ala	G1n	Val	His	Ala	Glÿ	Met.	Trp	Arg	Arg	Asn	Gly	Phe
2284				660					665					670		
2286	ser	Leu	Va.l	$\mathbf{Asu}$	G1n	$_{\mathrm{He}}$	17r	$\Gamma_{i}^{r} r$	1/r	His	Asn	Val		Cys	Ar.à	Arg
2287			675					680					685			
2289	Glu	Met.	Phe	Asp	i∵s	Asp		Väl	Met.	Leu	Gln		GLy	Val	ser	Met.
2290		690					695					700				
	Met	Asp	Pro	isn	H15		Leu	Met	He	Met		Ser	Arg	Phe	Glu	
2293						710		ι			715		_			720
	τyr	Gln	Leu	Phe		Thr	Pro	Asp	fyr		Lys	Arg	Phe	Ser		G.I u
2296					7.5					730					735	
	٧al	Thr	His	1.5	Sp	Vra 1	\ a i	Gin	745	ASN	ASN	Inr	Leu	750	Glu	G 1.01
2299		•	<b>T</b>	-		• • • •				<i>.</i>	~ l		Dha		D=0	
2301	Met	ı.eu	755	1 0.1		. 10	Met	760	Val	Gry	PFA	nrg	765	ASH	1110	GIY
	Val	c 1				. 1 .			e 1 is	116	1	tra		110	Tio	uio
2304	vai	770	OIII	v a i	1, 1 0	A1 a		wat	CITU	, 110	Lys	780		116	110	615
	Gin		Sor	1 4	r e	Arc.		212	ніс	Ser	£111			fus	ser	Len
2308		L.v. u	.,,,,			790	***. 1.			.,	795			j .,		800
	Pro	Cla	Aso	S Ln			Glu	Thr	GIV	Het.		Ser	Va l	He	Glu	
2311		0.1.1	/-		5 45				W - 1	810					815	
	Val	Ala	His	82.00	4.5	158	Pro	Glv	Leu		GIV	Ara	Glv	Met	Tyr	Glu
2314				· 21	•	•		•	825		•		•	830	•	
2316	Leu	Lys	Pro	Glu	CVS	Ala	f vs	Glu	Phe	Asn	Leu	Tyr	Phe	Tyr	His	Phe
2317		•	835		•			840				•	845	•		
2319	ser	Arg	Ala	din	din	Ser	1 8	Ala	Glu	G1u	Ala	Gln	Arg	Lys	Leu	Lys
2320		850					455	•				860				
2322	Arg	GLu	Asn	1.78	Gin	Asp	thr	Ala	Leu	Pro	Pro	Pro	Ala	Leu	Pro	Pro
2323	865					879					875					880
2325	ьрь	Cys	Pro	! eu	1-11+	Ala	Ser	Leu	<b>v</b> al		ile	Leu	Gln	Cys		Val
2326					n 8 5					890					895	
	Met	Leu	Tyr		Mis.	űl?	Thr	He		Gln	1 rp	Ala	Val		His	His
2329				14.5					995	_				910		
	Gl?	ser		111	21.1	4.14	ser		Leu	Gln	Arg	Val		His	Leu	He
2332			915					920					925			
2334	Gly	Met	Ala	£ + 14	11.	نانا	Glu	1.7 S	His	His	Letu	Glu	ASA	Ala	Val	Glu

RAW SEQUENCE LISTING DATE: 12/07/2000 PATENT APPLICATION: US/09/724,126 TIME: 07:57:43

Imput Set : A:\35966aseq.txt
output Set: N:\CRF3\12072000\1724126.raw

935 2337 Gly His Val Gln Thr Phe Thr Phe Thr Gln Lys Hie Ser Lys Pro Gly 2338 945 950 955 960 2340 Asp Ala Pro His Ash Ser Pro Ser Ile Leu Ala Met Leu Clu Thr Leu 970 955 2343 Oln Asn Ala-Pro Ser Leu Clu Ala His Lys Asp Met Ile Arg Trp Leu 2344 989 985 990 2346 Leu Lys Met Phe Ash Ala Tle Lys Lys Lie Arg Glu Cys Ser Ser Ser 2347 995 1006 1005 2349 Ser Pro Val Ala Clu Ala Clu Gly Thr Ile Met Glu Glu Ser Ser Arg. 2350 1010 1015 1020 2350 1010 Asp Lys Asp Lys Arg Lys Arg Lys Arg Lys Ala Glu lle Ala Arg Leu
E--> 2355 025 1030 1035 1040
2355 Arg Arg Glu Lys Lie Mer Ala Glu Met Ser Glu Met Glu Arg His Phe
2356 1045 1050 1055 2358 Ile Asp Glu Asu Lys Glu Leu Phe Gln Gln Thr Leu Glu Leu Asp Thr 2359 1000 1065 1070 2361 Ser Ala Ser Ala Ihr Leu Asp Ser Ser Pro Pro Val Ser Asp Ala Ala 2362 1075 1080 1085 2364 Leu Thr Ala Leu Gl; Pro Ala Gln Thr Gln Val Pro Glu Pro Arg Gln 2365 1090 1095 · 1100 2367 Phe Val Thr Cys 11c Leu Cys Gin Glu Giu Gin Glu Vai Thr Val Gly
E--> 236 105 1110 1115 1120
2370 Ser Arq Ala Met Val Leu Ala Aia Phe Vai Gin Arg Ser Thr Val Leu 2371 1125 1130 1135 2373 Ser Lys Asp Arg the Lys The Ile Ala Asp Pro Glu Lys Lyr Asp Pro 2374 \$1140\$ \$1140\$ \$1145\$2376 Leu Phe Met Bis Pro Asp Leu Ser Cys Gly Thr Bis Thr Gly Ser Cys 2377 1155 .1160 1165 2379 Gly His Val Mot His Ala His Cys Trp Gln Arg Tyr Phe Asp Ser Val 2380 1170 1175 1180 2382 GM 1a Lys GIn Gin Ard Ard GIn Gin Ard Leu Ard Leu His Thr Ser
E--> 238 185 1190 1195 1200
2385 124 Asp Val Giu Ash Giy Glu Phe Leu Cys Pro Leu Cys Glu Cys Leu
2386 1275 1275 1210 1215 2388 Ser Asn Th: Val the Pro Lou Lou Leu Pro Pro Arg Ser The Leu Ser 2389 1220 1225 2391 Arg Arg Leo Ash Phe Ser Asp Gln Pro Asp Leo Ala Gln Trp Thr Arg 2392 1235 1240 1245 2394 Ala Val Thr its dim life Lis Val Val Glm Met Lou Arg Arg Lys His 2395 1250 1253 1260 2406 Typ Lys Val Gt. Ten Lys Val His Pro Ash Glu Gly Asp Pro Arg Val 2407 1315 1320 . 1325

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2409 Pro Ile Leu Cys irp Gly Thr Cys Ala Tyr Thr ile Gln Ser Ile Glu 2416 1330 1340 1335 2412 Arg The Leu Ser Asp Glu Glu Lys Pro Val Phe Gly Pro Leu Pro Cys E--> 2413 (345) 1350 1355 1360 2415 Arg Leu Asp Asp Cvs Leu Arg Ser Leu Thr Arg Phe Ala Ala Ala His 2416 1365 1376 1375 2418 Jrp thr Val Ala Leu Leu Pro Val Val Gla Gly His Phe Cys Lys Leu 2419 1380 1385 1390 2421 Phe Ala Ser Leu Val Pro Ser Asp Ser Tyr Glu Asp Leu Pro Cys Ile 2422 1395 1409 1405 2424 Lou. Asp 11e Asp Met Phe His Lou Lou Val Gly Leu Val Lou Ala Phe 2425 1410 1415 1420 2427 Pro Ala Leu Cln Cys Gln Asp Phe Ser Gly Ser Ser Leu Ala Ihr Gly E--> 2428 425 1430 1435 1440 2430 Ser Leu His II- Phe His Leu Val Ihr Met. Ala His II- Val Gln Ile 2431 1145 1450 2433 Leu Leu Thr Ser Cys Thr Glu Glu Asn Gly Met Asp Gln Glu Asn Pro 1470 2434 1460 1465 2436 Thr Gly Glu Glu Glu Leu Ala The Leu Ser Leu His Lys Thr Leu His 2437 1475 1480 1485 2439 Gln Tyr Thr Gly Ser Ala Leu Lys Glu Ala Pro Ser Gly Trp His Leu 2440 1490 1495 1500 2442 Tray Arg Ser Vai Arg Ala Ala Ile Met Pro Phe Leu Lys Cys Ser Ala E--> 244 (505) 1510 1515 1520 2445 Lett Phe Phe His Ivr Lett Ash G1: Val Pro Ala Pro Pro Asp Lett G1n 2446 1529 1530 1535 2448 Val Ser Gl: the Ser His Phe Glu His Leu Cys Ass Tyr Leu Ser Leu 2449 1546 1545 2151 Pro Thr Ash Leu Fre His Leu Pho Gli Glu Ash Ser Asp Ile Met Ash 2452 1555 1560 1565 2454 Ser Leu He din Ser Trp Cts Gin Ash Ser diu Val Lys Arg Tyr Leu 2455 1570 1575 1580 2457 565 Gly Glu Ard Gl, Ala Ile Ser Tyr Pro Arg Gly Ala Asn Lys Leu E--> 2458 585 1590 1595 1600 2460 The Asp Leu Pro Glu Asp Lyr Ser Ser Leu Ile Asn Glu Ala Ser Asn 2461 1616 1615 2463 Phe Ser Cys Profins Ser Gly Gly Asp Lys Ser And Ala Pro Thr Leu 2464 16.0 16.30 2466 Cys Leu Vai Cys Gly Ser Leu Leu Cys Ser Glu Ser Tyr Cys Cys Glu 2467 1635 1640 1645 2469 Ala Glu Leu Glu St. Glu Asp Val Gly Ala Cys Thr Ala His Thr Tyr 2470 1650 1655 1660 2472 Ser Cys Gly Ser 317 Ala Gl? The Phe Leu Arg Val Arg Glu Cys Gln E--> 247 665 1670 1670 1675 1680 2475 Val Leu Phe 100 248 Gly Cys Phe Tyr Ser Pro Pro 2486 1696 1695 2478 fyr Lew Asp isp i/r Gfy Glu Thr Asp Gin Gly Leu Arg Arg Gly Asn 2479 1705 1710 2481 Pro Leu His tou Cys din Clu Arg Phe Arg Lys fle Gin Lys Leu Trp

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PAIENT APPLICATION: US/09/724,126

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Input Set : A:\35966aseq.txt

Output Set: N:\CRF3\12072000\1724126.raw

1715 2482 2484 Glm Glm His Ser lie Thr Glu Glu lie Gly His Ala Glm Glu Ala Asm 2484 of the fill arts set the fill of the control o 3136 <213> ORGANISM. Homo sapiens 3138 <400> SEQUENCE: 19 3139 Ala Met Glu Giy Asu Met Ala Asp Glu Glu Ala Gly Gly Thr Glu Arg 110 3142 Met Glu 11e Ser Ala Glu Leu Pro Glu 1hr Pro Glu Arg Leu Ala Ser 3143  $\sim$  20  $\sim$  25  $\sim$  36 3145 Trp Trp Asp Gin Gln Val Asp Phe Tyr Thr Ala Phe Leu His His Leu 3146 35 40 45 3148 Ala Gli Leu Vai Pro Glu Ile Tyr Pho Ala Glu Met Asp Pro Asp Leu 55 3149 50 60 3151 Glu Lys Glu Glu Glu Ser Val Glu Met Ser Ile Phe Thr Pro Leu Glu -0 75 3152 65 3154 Trp Tyr Leu Phe Gly Glu Asp Pro Asp Tle Cys Leu Glu Lys Leu Lys 65 90 3157 His Ser Gly Ala Phe Gli Leu Cys Gly Arg Val Phe Lys Ser Gly Glu 3158 100 105 110 3160 Thr Thr Tyr Sor As Ard Asp Cvs Ala Tle Asp Pro Thr Cys Val Leu 120 125 3161 115 2163 Cys Het Asp Tes Fhe IIn Asp Ser Val His Lys Ash His Acq Tyr Lys 3164 130 140 3166 Met His Thr Ser thr Gly Gly Gly Phe Cys Asp Cys Gly Asp Thr Glu 3167 145 150 150 155 3169 Ala Trp Lys Th: Gl. Pro Phe Cvs Val Ash His Glu Pro Glv Ard Ala 165 170 175 3170 31.72 Gly.Thr lle tws Gla Asb Ser Arg Cys Pro Leu Asb Glu Glu Val Ile 185 .н -190 3173 3175 Val Gin Ala Ari Lis IIe Phe Pro Ser Val IIe Lys Tyr Val Val Giu 31.76 195 200 205 3178 Met Thr Ile I:p Giu Giu Giu Lys Glu Leu Pro Pro Glu Leu Gin Ile 215 220 3179 210 3181 Arg Glu Lys tan Gla Ard Tyr Tyr Cys Vai Leu Phe Ash Asp Glu His 3182 225 \_ 30 235 3184 His Ser Tyr was 4.s val 110 Dyr Ser Leu Glm Arg Ala Leu Asp Cys 245 250 255 3185 3187 Glu Leu Ala Cin Aig Gin Leu His fhr Thr Ala He Asp Lys Glu Gly 265 270 3190 Arg Arg Ala vir i w Ala Sty Ala Tyr Ala Ala Cys Gln Gln Ala Lys 3191 27 280 285 3193 Glu Asp lleitus Scr His Ser Glu Ash Val Ser Glu His Bro Leu His 3194 - 290 298 3196 Val Glu Val for His Ser Glu fle Met Ala His Glu Lys Phe Ala Leu



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Input Set : A:\35966aseq.txt
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3197	305					310					315					320
3199		Leu	Glv	Ser	Trp	Met	Asn	Lys	He	Met	ser	Tyr	ser	ser	Asp	Phe
3200	-		•		325			_		3.30					335	
3202	Arq	Gln	1.1e	Phe	Cys	Gln	Ala	Cys	Leu	Arg	Glu	Clu	Pro	Asp	ser	Glu
3203				340					345					350		
3205	Asn	Pro	Cys	Leu	110	ser	Arg	Leu	Met	Leu	Trp	Asp	Ala	Lys	Lou	Tyr
3206			355					360					365			
3208	Lys	Gly	Ala	Arq	1.78	11e	Leu	His	G l.u	ī.eu	Hle	Phe	Ser	ser	Phe	Phe
1209		370					375					380				
3211	Met.	Glu	Met	G La	lyr		Lys	Leu	Phe	Ala		Glu	Phe	Val	Lys	
	385					390					395					400
3214	17 r	175	Gln	Len		Lys	Glu	Tyr	He		Asp	Asp	His	Asp		ser
3215					105					4.10					4.15	
3217	Tle	Ser	He		Ala	I.eu	Ser			Met	Phe	Thr	Val		Thr	Leu
3218				420					425		- 4			430		
3220	Ala	Arg		Leu	He	Glu	GLu		Asn	Val	He	ser		ire	inr	GLu
3221			435				_	440					445		_	
3223	Thr		Leu	Glu	Val	Leu		GIu	lyr	Leu	Asp		Asn	ASD	Lys	Phe
3224		450				. •	455	•		1	C1	460	tr., )		8 1 a	Val.
3226		Pne	GTH	GI.	1 · F	470	OIB	asp	Lys	Leu	475	Arq	vai	TYI	Ald	480
3227 3229		····		1	٠, ,,		t Les	1.00	110	car		D.F.O	The	Ha	Trn	-
3229	116	CYS	Asp	1.6-11	485	* / *	116	T.t.11	116	490	r. / a	FIU	1 111	116	495	1111
3232	Chi	^ ra	Lau	3 00		016	uha	1 4344	at Luc		Dha	A = (1	Sur	Dha		fve
3232	GIU	, nry	Leu	300	1.14 - 1	0.11	FILE	Leu	505	01,	1110	VI A	301	510	LCu	2,3
3235	Tle	بنجا	The	•	Mer:	33 n	GIV	Mist		Glu	Tim	Ara	Ara		Val	612
3236	1 1.1.	i.c.u	515	•				520				,	525	.,		
3238	Gln	His				7.80	Pro		Tro	Glu	Ala	Λla	He	Λla	He	Gln
3239		530	-				535					540				
3241	Met	GIn	Letu	LVS	ASI	110	Leu	Leu	Met.	Phe	Gln	Glu	Trp	Cys	Λla	CVS
	545			•		350					555		•	-		560
3244	Asp	Glu	Glu	Leu	i.en	Leu	۷al	Ala	17r	Lys	G1u	C7s	His	Lys	Ala	Val
3245					565					570					575	
3247	Met	Arg	Cys	ser	11.1	Sor	Phe	He	Ser	Ser	ser	Lys	Thr	Val	Val	Gln
3248				120					585					590		
3250	ser	Cys	ülγ	His	Ser	Leu	G1u		Lys	ser	Tyr	Arg	Vai	ser	Glu	Λsp
3251			595					600					605			
3253	Lon		Ser	:10	HIS	Len		Leu	$\operatorname{ser}$	Arg	Thr		Ala	G1y	Leu	His
3254		610					615					620				
3256		Arq	Leu	$S_{i}$ :	11.7		411	Ala	Val	ser		Leu	His	Glu	Phe	
3257						44					635					640
3259	Ser	Phe	Glu	ASE		::!n	Va l	.Clu	Val		Va l	Glu	Tyr	Pro		Arg
3260					1.15					650			_		655	
3262	Cys	i.eu	vai		Vil	ALa	Gin	val		Ald	Glu	мес	trp	-	Arg	ASN
3263				13190			• 1 .	,	665		7	· 1 -		670		c
3265	GLY			1 **1.	::(*	Seri	GIH		Pile	177	177	GID		Val	ržs	cys
3266	A		675		1	A	1	680	tlo	T 1	Hart	Low	685	Tle	C-1	115
3268	Arg	690	GIU	MUI	171	vab,	595	ASP	rie	116		700	GIH	116	GIY	MIG
3269		030					073					700				

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Input Set : A:\35966aseq.txt
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3271 3272		Leu	Met	Asp	Pro	Asn 710	Lys	Phe	Leu	Leu	Leu 715	Val	Leu	Gln	Arg	Tyr 720
3274 3275		Leu	Ala	Glu	Ala 725		Asn	Lys	Thr	11e		Thr	Lys	λsp	Gln 735	
3277	Leu	He	Lys	Gln 740		Asn	Thr	Leu	11e 745		Glu	меt	Leu	Gln 750		Leu
3278 3280	11e	izr			Giv	Glu	Arq			Pro	Gly	val	Gl.y		val.	Thr
3281 3283	Lys		755 Glu		1 h.r	Met		760 Glu	ile	He	His			Cys	ile	Glu
3284 3286	Pro	770 Met	Pro	His	ser	Ala	775 11e	Ala	Lys	Asn	Leu	780 Pro	Glu	Asn	Glu	Asn
3287	785					790					795					មិល
3289 3290	Asn	G l.u	Thr	G1:	Leu a05	Glu	Asn	Va l	He	810	Lys	Val	Ala	Thi	Phe 815	L7S
3292	Lys	Pro	Gl;		Ser	GIY	His	G17		Tyr	Gļu	Leu	Lys		Glu	ser
3293		•	•	5.20				1.1.	925		7	C* 0. m	Lua	830		ni i .
3295 3296	Leu		835	PH.	ASII	MCL	171	840	: y I	HIS	IVI	501	845	1111	GIII	nıs
3298	Ser			Glu	418	Met	Gln		Lys	Arg	Arg	Lys	Gln	Glu	Asn	Lys
3299		850					853					860				
3301		Glu	Ala	ieu	Pro		Pro	Pro	Pro	Pro	61u	Phe	СУВ	Pro	Ala	Phe 880
3302 3304		Luc	Va l		. o.,	870		ž an	Ce	Acn		Mot	Met	Tyr	f le	
3305	261	Lyn	V (1 1	1.17	835	1 47 63	1.011	-1.911	Cin	840				.,.	895	1,0,1
3307	Arg	Thr	Val	4 her	Glu	Aig	Ala	110	Asp	Thr	Asp	ser	Asn	iu	1rp	Thr
3308									905					910		
3310	GLu	Gły		ien	Gln	чес	Ala		His	He	I.eu	Ala		Cly	Len	Leu
33.11 3313	<i>a</i> 1		917			,	. • • • •	920		0.0	· 1 · ·	<i>.</i>	925	11.1	The	Dha
3313	GII	930	Lys	(,111	17.11	Leni	935	Lys	n.i.a	. 10	Cita	940		101	1 111	1.116
3316	Asp		Tyr	Ris	1. 8	Ala		Ara	Leu	Gly	Ser			Het	Asn	11e
3317			•			150				-	955					960
3319	GLn	Met.	Leu	100		i : s	Leu	Lys	Gly		Pro	Gln	Leu	Glu	_	Gln
3320	•				345	<b>.</b>		1	. • 1	970	r.L.	A	71	V . 1	975	t r:a
3322 3323	Lys	Asp		280	. 1: 1	: : ;	110	Tern	935	Mer	Pile	veb	1 11 1	990	Lys	ary
3325	Leu	Arq			Ser:	Cvs	Leu	He		Ala	Thr	thr	Ser		ser	Giu
3326			995					6001					1005	•		
3328	ser	11e	Lys	۸¢.	Asp			thr	His	Asp			Lys	Ala	G3 u	Arg
3329		1010		_			1015					1020	_			
3331	-		Lys	Ala		. 616 [630]	Ala	Arg	Leu		Arq 1035	Gin	Lys	He.		A1a 1040
3332 3334			Car				1.46	à e n	Pha			1 hr	His	Live		
3335	OTII	ii.e.c	JC1		645	- 111	2.73			1050	514				1050	
3337	Tyr	Asp	Asn	in:	Sei	31a	MHL	Pro	Gly	t.ys	G1u	Asp	ser	He	Hei	Glu
3338	-	-		(6,,,)					1065					lane.		
3340	GLu			int	610	Ala			Asp	Tyr	Ser			Alu	Len	G17
3341 3343	r.		1075	···		2		080	Clu	1	Clu		1085	The	Cus	11
2243	L LO	LYS	wrâ	uı.	7:0	.,	* 42 1	1111	o i u	1. , 3	2111	1	ren		C 7.5	

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PATERNI APPLICATION: US/09/724,126

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Input Set : A:\35966aseq.txt
Output Set: N:\CRF3\12072000\1724126.raw

3344 1090	1095	1100
3346 Leu Cys Gin Clu Ci	u Gln Glu Val Lys j	lle Glu Asn Asn Ala Met Val
3347 1105	1.110	1115 1120
3349 Leu Ser Ala Cys Va	l Gln Lys Ser Thr !	Ala Leu Thr Gln His Arg Gly
3350 112		
3352 Lys Pro 11e Ciu Le	u Ser Giy Glu Alu i	Lou Asp Pro Leu Phe Met Asp
3353 1140	1145	1150
3355 Pro Asp Leu Ala Ty	r Gly Thr Tyr Thr C	Gly Ser Cys Gly His Val Met
3356 1155	1160	1165
3358 His Ala Val Cvs Ir	p Gln Lys Tyr Phe G	Glu Ala Val Gln Leu Ser Ser
3359 3170	1175	1180
3361 Gln Gln Arg 11. Hi	s Val Asp Leu Phe A	Asp Leu Glu Ser Gly Glu Tyr
	1190	1195 1200
3364 Len Cys Pro Leu Cy	s Ivs Ser Leu Cys A	Asn Thr Val Ile Pro Ile Ile
3365	5 11	210 1215
		Glu Asn Ala Asp Ala Leu Ala
3368 1220	1225	1230
		In Thr Val Leu Ala Arg Ile
3371 1235	1240	1245
		Sly Glu Asn Pro lie Pro ile
3374 1250	1255	1260
		Thr Leu Glu Phe His Ser Ile
•	. 1270	1275 1280
3377 1265		Lýs Tyr Ser Asn Ser Ile Lys
		290 1295
	n ene mis int int i 1365	He Tyr Arg Tle Gly Len Lys 1310
	n Ard ash Pro Arg	Val Pro Het Leu Thr Trp Ser
3386 1315	1320	1325
	: The Sin Ala file (	Glu Ash Leu Eeu Gly Asp Glu
	13 (5	1340
3391 Gly Lys Pro Leu Ph	e GI - Ala Leu Gin A	Asn Arg Gln His Asn Gly Leu
3392 1345	1350	1355 1360
		Sin Arg lie Thr Cys Pro Gin
3395	-	370 1375
3397 Val Leu Ile :11 1:	s His Let Val Azg 1	Leu Leu Ser Val Val Leu Pro
3398 1386	1585	1390
3400 Asn Ile Lys 50: 0.	a Asp Thi Pio Cys I	Leu Leu Ser Ile Asp Leu Phe
3401 1395	14(4)	1405
3403 His Val Lee Val	, Ara Vai Leu Ala I	the Pro Ser Leu Tyr Trp Asp
3404 1410	1415	1420 -
3406 Asp Pro Val Asp In	u Gin Pro Ser Ser V	Val Ser Ser Ser Tyr Asn His
3407 1425 .	1430	1435 1440
3409 Leu Tyr Leu Pho H:	s ten lie Thr Met /	Ala His Met Leu Gln Tle Leu
341.0	• 1	150 1455
3412 Leu Thr Va! - :: '!	r llo Len Pro Len A	Ma Glm Val Glm Glm Asp Ser
3413 - 1160	1165	1470
3415 Giu Clu Ale His Se	r Ala Ser Ser Phe I	the Ala Glu lle Ser Gln Tyr
3416 1475	1480	1485
		,

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Output Set: N:\CRF3\12072000\1724126.raw

3418 Thr Ser Gly Ser the Gly Cys Asp The Pro Gly Trp Tyr Leu Trp Val 1495 1500 3419 1490 3421 Ser Leu Wys Ash Gly lle Thr Pro Tyr Leu Arg Cys Ala Ala Leu Phe 1510 1515 3422 1505 3424 Phe His Tyr Leu Leu Gly Val Thr Pro Pro Glu Glu Leu His Thr Asn . 1525 3425 1530 1535 3427 Ser Ala Giu Gly Glu Ivr Ser Ala Leu Cys Ser Tyr Leu Ser Leu Pro 3428 1540 1545 1550 3430 Thr Ash Leu Phe Leu Leu Phe Gln Glu Tyr Trp Asp Thr Val Arg Pro 3131 1555 1560 1565 5433 Lou Leu Gli Arg Arg Cys Ala Asp Pro Ala Leu Leu Asn Cys Leu Lys 2434 1570 1575 1580 3436 Cln Lys Asn thr Val Val Arg Tyr Pro Arg Lys Arg Asn Ser Leu Ile 3437 1585 1590 1595 3439 Glu Leu Pro Asp Asp Tyr Ser Cys Leu Leu Asn Gln Ala Ser His Phe 3440 1605 1610 3442 Arg Cys Pro Arg Ser Ala Asp Asp Glu Arg Lys His Pro Val Leu Cys 3443 1626 1625 1630 3445 Leu Phe Cys Gly Ala He Leu Cys Ser Gln Asn Ile Cys Cys Gln Glu 3446 1635 1640 1645 3448 fle Val Ash Gly Glu Glu Val Gly Ala Cys Tle Phe His Ala Leu His 3449 1650 1655 1660 3451 Cys Lys Ala Ard Cly Cys Ata Tyr Pro Ala Pro Tyr Leu Asp Glu Tyr 3452 1665 1670 1675 1680 3454 Glv Glu Thr Asp Pro Glv Leu Lys Arg Glv Ash Pro Leu His Leu Ser 3455 1685 1690 1695 3457 Arg Giu Arg Ivr Arg Lys Leu His Leu Val Trp Gin Gin His Cys Ile 1705 3458 1700 1710 3460 The Glu Glu He Ala Arn Ser Glu Glu Thr Ash Glu Met Leu Phe Gly -> 3463 Phe Asn Trp Gln Leu Leu 3461 1715 1720 E--> 3464 1730

do not count ending stop codon

suret page formas enon

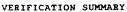
(only the enned portion)

<210> 18 <211> 5205 <212> DNA <213> Homo sapiens

<400> 18
atggcggacg aggaggctgg aggtactgag aggatggaaa tcagcgcgga gttaccccag 60
acccetcagc gtctggcatc ttggtgggat cagcaagttg attttatac tgctttcttg 120
catcatttgg cacaattggt gccagaaatt tactttgctg aaatggaccc agacttggaa 180
aagcaggagg aaagtgtaca aatgtcaata ttcactccac tggaatggta cttatttgga 240
gaagatccag atatttgctt agagaaattg aagcacagtg gagcatttca gctttgtggg 300
agggttttca aaagtggaga gacaacctat tcttgcaggg attgtgcaat tgatccaaca 360
tgtgtactct gtatggactg cttccaggac agtgttcata aaaatcatcg ttacaagatg 420
catacttcta ctggaggagg gttctgtgac tgtggagaca cagaggcatg gaaaactggc 480
cctttttgtg taaatcatga acctggaaga gcaggtacta taaaagagaa ttcacgctgt 540
ccgttgaatg aagaggtaat tgtccaagcc aggaaaatat ttccttcagt gataaaatat 600
gtcgtagaaa tgactatatg ggaagaggaa aaagaactgc ctcctgaact ccagataagg 660
kmryyc oddh hsydhgtcat atacagccta caaagagctc ttgactgtga gctcgcagag 720
gcccagttgc ataccactgc cattgacaaa gagggtcgtc gggctgttaa agcgggagct 780

See 10

for geecageige , formany fleet



L:3453 M:342 E: Invalid Stop Code on Error, SIOP CODON:\*

1:3464 M:332 E: (32) invalid/Missing Amino Acid Numbering, SEQ ID:19

PATENT APPLICATION: US/09/724,126

DATE: 12/07/2000 ' TIME: 07:57:45

Input Set : A:\35966aseq.txt

entput Set: N:\CRF3\12072000\1724126.raw

L:11 M:270 C: Current Application Number differs, Replaced Application Number L:12 M:271 C: Current Filing Date differs. Replaced Current Filing Date L:707 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:2 M:332 Repeated in SeqNo=2 L:1534 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:4 M:332 Repeated in SegNo 4 L:2353 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ 1D:6 H:332 Repeated in SegNor6 1:2980 M:258 W: Mandatory Feature missing, <220> not found for SEQ ID#:18 1:2980 M:258 W: Mandatory Ceature missing, <221> not found for SEQ ID#:18 L:2980 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:18 L:2980 M:258 W: Mandatory Feature missing, <223> not found for SEQ ID#:18 1:2980 M:340 W: (46) "h" or "Xah" used: Peature required, for SEQ 1D#:18

RAW SEQUENCE LISTING DATE: 12/07/2000
PATENT APPLICATION: US/09/724,126 TIME: 07:57:43

Input Set : A:\35966aseq.txt

Output Set: N:\CRF3\12072000\1724126.raw

703 Glu Ile Thr His Asp Lys Glu Lys Ala Glu Arg Lys Arg Lys Ala Glu 704 1010 1015 1020 TOG Ala Ala Arg Leu His Arg Gln Lys lle Met Ala Gln Met Ser Ala Leu E-->  $707 \underbrace{025}_{025}$  1030 1035 1040 709 Glm Lys Ash Phe Ile Glu Thr His Lys Leu Met Tyr Asp Ash Ihr Ser 719 1045 1050 712 Glu Met Pro Gly Lys Glu Asp Ser lle Met Glu Glu Glu Ser Thr Pro 713 1060 1065 1070 715 Aid Val Ser Asp Tyr Ser Arg (le Ala Leu Cly Pro Lys Arg Gly Pro 716 1075 1080 1085 718 Ser Vai Thr Glu Lys Glu Val Leu Thr Cys Tle Leu Cys Gln Glu Glu 719 1090 1095 1100 721 Gla Giu Val Lys Ile Glu Asn Asn Ala Met Val Leu Ser Ala Cys Val E--> 722 (105) 1105 1110 1115 1120 724 Gln Lys Ser Thr Ala Leu Thr Gln His Arg Gly Lys Pro Ile Glu Leu 1125 1130 1135 727 Ser Gl/ Glu Ala Leu Asp Pro Leu Phe Met Asp Pro Asp Leu Ala Tyr 1140 1145 730 Gly Thr Tyr Thr Gly Ser Cys Gly His Val Met His Ala Val Cys Trp 731 1155 1160 1165 1165 733 Gln Lys Tyr Phe Glu Ala Val Gln Leu Ser Ser Gln Gln Arg Ile His 734 1.170 1.175 1180 736 Val Asp Leu Fhe Asp Leu Glu Ser Gly Glu Tyr Leu Cys Pro Leu Cys E--> 737  $\underbrace{185}_{1200}$  1190 1195 1200 739 Lys Ser Leu Cys Asn Thr Val Tle Pro Tle Lie Pro Leu Gln Pro Gln 740 1205 1216 742 Lys Tie Aso Ser Glu Aso Ala Asp Ala Leu Ala Gin Leu Leu Thr Leu 743 1225 1220 1230 745 Ala Arg Txp Tle Gln Thr Val Len Ala Arg Tle Ser Gly Tyr Asn Ile 746 1235 1240 1.245 748 Ard His Ala Lys Gly Glu Ash Pro The Pro The Phe Phe Ash Gla Gly 1255 1260 751 Mer Gly Asp Ser Thr Leu Glu Phe His Ser Ile Leu Ser Phe Gly Val E--> 752 265 1265 1270 1275 1280 754 Glu Ser Ser Ile Lys Tyr Ser Asn Ser Ile Lys Glu Met Val ile Leu 755 1285 1290 1295 757 Phe Ala Thr Thr Ile Tyr Arg Ile Gly Leu Lys Val Pro Pro Asp Glu 758 1300 1305 1310 760 Arg Asp Pro Arg Val Pro Met Leu Thr Irp Ser Thr Cys Ala Phe Thr 761 1315 1320 1325 763 The Gln Ala The Glu Ash Leu Leu Gly Asp Glu Gly Lys Pro Leu Phe 764 . 1330 \$1335\$ 1340756 Gly Ala Leu Gln Asn Arg Gln His Asn Gly Leu Lys Ala Leu Met Gln E--> 767 (345) 1345 1350 1355 1360 769 Phe Ala Val Ala Glu Arg lie Thr Cys Pro Glu Val Leu lie Glu Lys 1365 1370 1375 772 His Leu Val Arg Leu Leu Ser Val Val Leu Pro Asn 110 Lys Ser Glu 773 1380 1390 1385 775 Asp Ihr Pro Cys Leu Leu Ser Ile Asp Leu Phe His Val Leu Val Gly

When numbering
the first amero'
acid on a here,
begin number wirder
first letter of amero'
acid, 2.3. Ala space
1025 space

Here erswea spece Herts between last number and first letter of following americ acid. Po hot let numbers "run endo next americ acid RAW SEQUENCE LISTING DAID: 12/07/2000 PATENT APPLICATION: US/09/724,126 TIME: 07:57:13

Input Set : A:\35966aseq.txt

Output Set: N:\CRF3\12072000\1724126.raw

1395 1400 778 Ala Val Leu Ala Phe Pro Ser Leu Tyr Trp Asp Asp Pro Val Asp Leu 779 1410 1415 1420 781 Ole Pro Ser Ser Val Ser Ser Ser lyr Asn His Leu lyr Leu Phe His E--> 78 425 1430 1435 1440
784 Leu lle Thr Met Ala His Met Leu Glu lle Leu leu lhr Val Asp ihr 785 1445 1445 1450 1450 787 Gly Leu Pro Leu Ala Glm Val Glu Glu Asp Ser Glu Glu Ala His Ser 783 1460 1465 1470 790 Ala Ser Ser Phe Phe Ala Glu He Ser Gln Tyr Inr Ser Gly Ser He 791 1475 1480 1485 793 Gly Cys Asp Ile Pro Gly Trp Tvr Leu Trp Val Ser Leu Lys Asn Gly 794 1496 1495 1500 796 La Thr Pro Tyr Leu Arg Cys Ala Ala Leu Phe Phe His Tyr Leu Leu E--> 796 505 1510 1515 1520 799 Gry Val Thr Pro Pro Glu Glu Leu His Thr Asn Ser Ala Glu Glv Glu 800 1525 1530 1530 802 Tyr Ser Ala Leu Cys Ser Tyr Leu Ser Leu Pro fhr Ash Leu Phe Leu 803 1540 1545 1550 805 Leu Phe Gln Glu Tyr Trp Asp Thr Val Arg Pro Leu Leu Gln Arg Trp 806 1555 1560 . 1565 808 Cys Ala Asp Pro Ala Leu Leu Asn Cys Leu Lys Gin Lys Asn Thr Val 809 - 1570 - 1580 811 Var Arg Tyr Pro Arg Lys Arg Ash Ser Leu fle Glu Leu Pro Asp Asp E--> 81 585 1590 1595 1600 814 <del>191</del> Ser Cys Leu Leu Asn Gln Ala Ser His Phe Arg Cys Pro Arg Ser 815 1605 1610 1615 817 Ala Asp Asp Glu Arg Lys His Pro Val Leu Cys Leu Phe Cys Gly Ala 818 1620 1625 1630 820 lle Leu Cys Ser Gl<br/>n Asn Tle Cys Cys Gl<br/>n Glu 1<br/>le Val Asn Gly Glu 821 \$1635\$ \$1640\$ \$1645323 Glu Val Gly Ala Cys Ile Phe His Ala Leu His Cvs Gly Ala Gly Val 824 1650 1655 1660 826 C/S Fle Phe Leu Lys 11e Arg Giu Cys Arg Vai Vai Leu Vai Giu Gly E--> 82 665 1670 1675 1680829 Lys Ala Arg Gly Cys Ala Tyr Pro Ala Pro Tyr Leu Asp Glu Tyr Gly 830 1685 1690 1595 832 Glu Thr Asp Pro Gly Leu Lys Arg Gly Asn Pro Leu His Leu Ser Arg 833 \$1700\$ \$1705\$ \$1716835 Glu Arg Tyr Arg Lys Leu His Leu Val Trp Gln Gln His Cys 11e Tle 836 \$1715\$ \$1720\$ \$1725\$838 Glu Glu Ile Ala Arg Ser Glu Glu Thr Ash Glu Met Leu Phe Gly Phe 839 1730 1735 E--> 841 (745) 130 210> SEQ ID NO: 4 1336 <211> LENGIH: 1755 1337 <212> TYPE: PRT 1338 <213> ORGANISM: Homo sapiens

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/724,126 DATE: 12/07/2000 TIMD: 07:57:43

Input Set : A:\35966aseq.txt
Output Set: N:\CRF3\12072000\1724126.raw

1340	<401	0> S!	EQUE	NCE:	4											
1341						Glu	Pro	Glu	Val	Gln	Ala	Tie	Asp	Arc	ser	Leu
1342	1.				5					10			•	*	15	
1344	Leu	Glu	Cys	ser	Ala	G.l.u	Glu	11e	Ala	Gly	Lys	Trp	Leu	Gln	Ala	Thr
1345				20					25					30		
1347	Asp	Lou	thr	Arg	clu	Val	ry r	Gln	His	Leu	Ala	His	Tyr	Val	Pro	LVS
1348			35					4 U					4.5			
1350	Lle	Tyr	Cys	Arg	Gly	Pro	Asn	Pro	Phe	Pro	Gln	Lys	Glu	Asp	Met	Leu
1351		50					55					60				
1353	Ala	Gin	His	Val	Leu	Leu	G17	Pro	Met	Glu	Trp	tyr	Leu	Cys	Gly	Glu
1354	65					70					7.5					80
1356	Asp	Pro	Ala	Phe		Phe	Pro	Lys	Leu	Glu	Gln	Ala	Asn	1.78	PTO	Ser
1357					85					90					95	
1559	His	f.eu	Cys		Arg	Va.l	Phe	Iys		Gly	Giu	Pro	Thr	-	Ser	Cys
1360				100					105					110		
1362	Anq	Asp		Ala	Vai	Asp	Pro		Cys	Val	Leu	Cys		GLu	C∵s	Phe
1363			115			_		120					125			
1365	ren		ser	110	HIS	Arg		HIS	Arg	LAL	arg		Thr	Thr	Ser	Gly
1366	a 1	1.30		rol. a			135	a		*1 .	~ 1	140				
1368		GIY	GLY	Fne	Cys	150	Cys	GIV	Asp	inr		Ala	тгр	LYS	GLu	
		Tue	C.40	city.	Este		e-1		100	Tho	155	C1	T1.			160
1371 1372	P10	1 9 1	Cys	(1711	165	пть	GIU	Lett	asn	170	ser	GIU	1.163	ULU	175	11.1.11
1374	Clu	Acn	Dr.	1 (2)		uie	Lou	Car	200		Val	Tla	5 La	6 mars		T
1375	GIN	nati	110	180	• 44 1	1113	L.Cu	361	185	wah	Val	116	ита	190	1111	131
1377	Agn	TIA	Pha		rla	Thr	Pha	a no		Ala	Va l	G1 o	Tia		The	Trees
1378	21271:	2. 4	195	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	1.11		1	200	1 7.1	nica	V U .1	014	205	1.611	1 113.	111
1380	GTu	TMS		Sor	Glu	Len	Pro		Asp	Len	GIn	Meat		Glu	Tive	Ser
1381		210					215			2		220		0 u	2.7	
1383	Asp		Ivr	Ivr	Cvs	Met.		Phe	Asn	Asp	Glu		His	Thr	Tyr	Glu
	225		-	•	-	230					235					240
1386	Gln	Val	Ile	Tyr	Thr	I.eu	G.l rı	Lys	Ala	Val	Asn	Cys	Thr	Gln	LVS	G.l ti
1387					245			-		250		•			255	
1389	Ala	lie	Gly	Phe	Ala	Thr	Thr	Val	Asp	Arg	Asp	G1y	Arg	Arg	ser	Val
1390				260					265					270		
1392	Arg	Tyr	Gly	Asp	Phe	Gln	Fyr	Cys	G1u	G l.n	Ala	L; s	Ser	Va i.	Tie	Va L
1393			275					280					285			
1395	Arg		Thr	ser	Arg	Glu		Lys	Pro	Leu	Lys	Va1	Clu	Val	He L	His
1396		340					295					300				
1398		Ser	He	Val	Ala		Gln	Asn	Phe	GLy		Lys	Leu	Leu	ser	Trp
1399						310					315					320
1401	Leu	Gly	ser	Tle		Gly	Ivr	Ser	Asp		Leu	Arg	Arg	Lle		Cys:
1402				_	325					330					335	
1404	GLn	Val	GLY		Gin	GLu	GIY	Pro		G l.y	GLu	asn	Ser		1.641	Va I.
1405	•		<b>.</b>	340	·				345	_		_		350		
1407	Asp	Arg		мет	ı.eu	ser	ASP		1.78	Leu	Frp	1.7S		Ala	Arg	Ser
1408	176.1	Ti	355	Cla	T	Dhe	Maria	360	Ct as we	*			365		<b>-</b>	******
1410	va i		111.5	G.I II	ı.eu	ьпе		ser	ser	r.eu	ren		ASP	Leu	LYS	iyr
1411		376					375					380				

RAW SEQUENCE LISTING DATE: 12/07/2000 PATENT APPLICATION: US/09/724,126 FIME: 07:57:43

Input Set : A:\35966aseq.txt
Output Set: N:\CRF3\12072000\1724126.raw

	Lys   335		Leu	Phe	Ala	Val		Phe	Ala	Lys	Asn 395		Gln	Gln	L⊷u	Gln 400
1416	Arq	Asp	Phe	Met	Glu	Asp	Asp	His	GLu	Arg	Λla	Val	Ser	Va1	thr	
1417					405			.,,,		410					4.15	
1419	Leu	Ser	Val	Gln	Phe	Phe	Thr	Ala	Pro			Ala	2 r cr	Mer		
1420				420					425				,	430		1.1.0
1422	l lbr	Glu	Glu			Her	Ser	He			178	thr	Phe			ari e
1423			435					440		2.1.			445	11.50	.,5	111.3
1425	Leu	Arq	His	Arq	Asp	Ala	Gln	Gly	Arg	Phe	Gln	Phe		Ara	157	i her
1436		450		•			155					100		712.5	+ ; .	
1428	Ala	Leu	Gln	Ala	Phe	l.∀s	Phe	Arg	Ara	Val	Glo		Len	حرانا	Lad	Aso
	465					470					475					480
1431	Leu	1.78	17r	Val	Leu	He	ser	Lys	Pro	Thr	Glu	Erp	Ser	Asp	Glu	
1432					485			•		490					495	
1434	Arq	Gln	L∵s	Phe	Leu	Glu	G17	Fhe	Asp	Ala	Phe	Leu	Glu	Leu	Leu	Lis
1435				500					505					51.0		
1437	Cys	Met	Gln	Gly	Met	Asp	Pro	rle	Thr	Arq	Gln	Val	Gl∵	Gln	His	He
1438			5.1.5					520					525			
1440	G l.u	Her.	Glu	Pro	Glu	Trp	Glu	Ala	A1a	Phe	Thr	Leu	Gln	Met	Lys	Leu
1441		530					535					540				
1443	Thr	His	Val.	rle	ser	Met	Mer	Gln	Asp	frp	Cys	Ala	ser	Asp	Glu	1.78
1444	545					550					555					560
1446	Val	Leu	Ile	Glu	Ala	Tyr	LVS	î.ys	Cys	Leu	ALa	Val	Leu	Met	GLn	Cys
1447					565					570					575	
1449	His	GL7	Gly		Thr	Asp	$GL\gamma$	Glu		Pro	Tle	Thr	Leu	ser	lle	C∵s
1450				580					585					590		
1452	GL7	His	Ser	Val	Glu	Thr	1.10	Arg	Tyr	Cys	Val	Ser		Glu	I.ys	Val
1453			595					600					605			
1455	Ser	110	His	Leu	firo	Val		Arg	Leu	Leu	Ala		Leu	His	Va.i	Leu
1456		61.0					615					620				
		ser	LyS	ser	G.Fu		Aia	Tyr	Lys	Phe		Glu	Leu	Leu	Pro	
	625		T		T1	630			- 1		635	_				640
1461 1462	Ser	Gru	Leu	ser	645	Pro	Het	Leu	1.16		HIS	Pro	Leu	Arg		Leu
	Va.	T cur	C: 10	* 1		17 - 1	11:0			650			_		655	_,
1465	7 CL 1	L. T. U	1.7.2	660	(3.1.11	vaı	HIS	Ala	665	Me C	rrp	arg	Arg		GTĀ	rne
1467	Sar	Lan	Va 1		Gla	Tla	Tur	Tern		uia	. ~	57-51	7	670		S
1468	.,	LCu	675	r.an	GIH	110	171	630	171	11 1.5	7511	val	685	Cys	Arg	AEG
1470	Glu	Met		Len	Tyre	Acn	Val.		Mat	Lan	/:1 n	The		Wa i	200	II a k
1471	.,	590			1-2-15	24.7	695		1465	174:11	(7.3, 11	700	GLY	Val.	261	1-11-5 (
1473	Mert		Pro	Asn	His	Pho		Mert	110	Mastr	f 4311		Ara	Dho	clo	Loui
1474	705	****F				71.0		1101	1. (	rns c	71.5	., e. 1	21.19	ring	O.L U	720
1476		Gln	11e	Phe	Ser		Pro	Asn	(ve	G) v		Ara	Dha	Sor	Sam	
1477	- '				725					730	<sub>1</sub>	-1-79		.,	735	.,
1479	Lle	Thr	His	Lvs		Val.	Val	Gin	Gln		Asn	Thr	Len	116		c1a
1480				740			<del>-</del>		715					750	J. U	J 1. U
1482	иет	Leu	Tyr	Leu	Lle	He	Ho t	Leu		Glv	GLu	Ara	Phe		Pro	Gly
1483			755					760		-			765			-
1485	Val	GLy	Gln	Val.	Asn	Ala	Thir	Asp	G l.u	Tle	Lys	Arg		Tle	Lle	H i.s
		-						•		-		,				

RAW SEQUENCE LISTING DATE: 12/07/2000 PATENT APPLICATION: US/09/724,126 TIME: 07:57:43

input Set : A:\35966aseq.txt
Ourput Set: N:\CRF3\12072000\1724126.raw

1486 770 775 1438 Glm Leu Ser lie Lys Pro Met Ala His Ser Glu Leu Val Lys Ser Leu 1489 785 790 795 1491 Pro Glu Asp Glu Asp Lys Glu fhr Gly Met Glu Ser Val ile Glu Ala 1492 805 810 810 1494 Val Ala His Pho Lys Lys Pro Gly Leu Thr Gly Arg Gly Mot Tyr Glu 1495 820 825 830 1497 Leu Lys Pro Giu Cys Ala Lys Glu Phe Asn Leu Tyr Phe Tyr His Phe 1498 \$a35\$ 840 845 1500 Ser Arg Ala Giu Gin Ser Lys Ala Giu Clu Ala Gin Arg Lys Leu Lys 1501 850 855 856 1503 Arg Gln Asn Arg Glu Asp Thr Ala Leu Pro Pro Pro Val Leu Pro Pro 1504 865 870 880 1506 Phe Cys Pro Leu Phe Ala Ser Leu Val Asn Tie Leu Gin Ser Asp Val 1507 885 890 895 1500 Met Leu Cvs 11e Met Gly Thr 11e Leu Gln Trp Ala Val Glu His Asn 1510 900 905 910 1512 Giy Tyr Ala Trp Ser Glu Ser Met Leu Gin Arg Val Leu Bis Leu 11e 1513 - 915 920 925 1515 Giy Met Ala Leu Gin Glu Glu Lys Gin His Leu Glu Asn Val Thr Glu 1516 -930 -935 -9461518 GLu His Val Val The Phe The Phe The Gln Lys Fle Ser Lys Pro Gly 1519 945 950 955 1521 Giu Ala Pro Lys Asu Ser Pro Ser IIe Leu Ala Met Leu Glu Thr Leu 1522 965 975 1524 Glm Asm Ala Pro Tyr Leu Glu Val His Lys Asp Met Ile Arg Trp Ile 1525 980 985 996 1527 Leu Lys The Phe Asu Ala Val Lys Lys Met Arg Glu Ser Ser Pro Inc 1528 995 1900 1005 1530 Ser Pro Val Ala Glu Thr Glu Gly Thr 11e Met Glu Glu Ser Ser Arg 1531 1010 1015 10201533 Asp Lys Asp Lys Ala Glu Arg Lys Arg Lys Ala Glu fle Ala Arg Leu E--> 1534 025 1030 1035 1040 1536 Arg Arg Glu Lys lie Met Ala Gln Met Ser Glu Met Gln Arg His Phe 1045 1050 1055 1539 The Asp Glu Ash Lys Glu Leu Phe Gln Gln Thr Leu Glu Leu Asp Ala 1540 1060 1065 1670 1542 Ser Thr Ser Ala Val Leu Asp His Ser Pro Val Ala Ser Asp Het Thr 1543 1075 1080 1085 1545 Leu Thr Ala Leu Gly Pro Thr Gln Thr Gln Val Pro Clu Gln Arg Gln 1546 1090 1095 1100 1548 Pho Val The Cys lle Leu Cys Gin Glu Glu Glu Glu Val Lys Val Gru: E--> 1549(105) 1110 1115 1120 1551 Ser Arg Ala Met Val Leu Ala Ala Phe Val Gin Arg Ser ihr Val Leu 1552 1135 1130 1135 1554 Ser Lys Asn Arg Ser Lys Phe Ile Gln Asp Pro Glu Lys Tyr Asp Pro 1555  $1140 \hspace{1.5cm} 1145 \hspace{1.5cm} 1150$ 1557 Leu Phe Met His Pro Asp Leu Ser Cys Gly Thr His Thr Ser Ser Cys 1558 1155 1160

RAW SEQUENCE LISTING DAIL: 12/67/2600
PATENT APPLICATION: US/09/724,126 TIME: 07:57:43

Input Set : A:\35966aseq.txt
Output Set: N:\CRF3\12072000\1724126.raw

1560 Gly His 1le Met His Ala His Cys Trp Gln Arg Tyr Phe Asp Ser Val 1551 1170 1175 1180 1363 (n) the Lvs Glu Gln Arg Arg Gln Gln Arg Leu Arg Leu His Thr Ser E--> 1564 (185) 1190 1195 1200 1366 Tyr Asp Val Glu Asn Gly Glu Phe Leu Cys Pro Leu Cys Glu Cys Leu 1567 1205 1216 1215 1369 Ser Ash the Val Ile Pro Leu Leu Leu Pro Pro Ary Ash Ile Phe Ash 157) 1220 1225 1236 1372 Asn Arg Leu Asn Phe Ser Asp Cln Pro Asn Leu fhr Cln Tro 11e Arg 1373 1235 1240 1245 1575 Thr fle Ser Gln Gln Tle Lys Ala Leu Gln Phe Leu Arg Lys Glu Glu 1574 1250 1255 1260 1578 1578 5. The Pro Asn Asn Ala Ser the Lys Asn Ser Glu Asn Val Asp Glu E--> 157 (265) 1270 1275 1280 1581 Len Glu Leu Pro Glu Gly Phe Arg Pro Asp Phe Arg Pro Lys Ile Pro 1582 1285 1290 1395 1564 Tyr Ser Glu Ser 11e Lys Glu Met Leu Thr Thr Phe Gly (hr Ala Thr 1585 \$1300\$ \$1505\$ \$13101537 Tyr Lys Val Gly Leu Lys Val His Pro Asn Glu Glu Asp Pro Arq Val 1588 1315 1320 1325 1500 Pro The Met Cys Trp Gly Ser Cys Ala Tyr Thr fle Gla Ser ile Glu 1591 1330 1335 1340 1593 / The Leu Ser Asp Glu Asp Lys Pro Leu Phe Gly Pro Leu Pro C/s
E--> 1594 345 1350 1355 1360
1596 Arg Leu Asp Asp Cys Leu Arg Ser Leu Thr Arg Phe Ala Ala Ala His
1597 1365 1370 1375 1599 Trp Thr Val Ala Ser Val Ser Val Vat Gin Gly His Phe Cys Lys Len 1600 1380 1385 1395 1602 Phe Ala Ser Leo Val Pro Asu Asp Ser His Glu Glu Leo Pro Cys Lle 1603 \$1395\$ \$1160 \$14051605 Leu Asp The Asp Met Phe His Leu Leu Val Gly Leu Val Leu Ala Phe 1606 -1410 -1415 -14201508 PT Ala Leu Gln Cys Gln Asp Phe Ser Gly Ile Ser Leu Gly Thr Gly
E--> 1600 429 1430 1435 1440
1511 Asp Leu His Ile Phe His Leu Val Thr Met Ala His Ile Ile Gln Ile
1612 1445 1450 1450 1614 Leu Leu Thr Ser Cys Thr Glu Glu Asn Gly Met Asp Gln Glu Asn Pro 1615 1460 1465 1470 1617 Pro Cys Glu Glu Glu Ser Ala Val Leu Ala Leu Tyr Lys Thr Leu His 1618 1475 1480 1485 1620 Gls Tyr Thr Gly Ser Ala Leu Lys Glu Ile Pro Ser Gly Trp His Leu 1621 1490 1495 1500 1623 Pro Arg Ser Val Arg Ala Gly Ile Net Pro Phe Leu Lys Cys Ser Ala E--> 162 503 1510 1510 1515 1520 Leu Phe Phe His Tyr Leu Asn Gly Val Pro Ser Pro Pro Asp ile Gln 1626 1627 1525 1530 1535 1629 Val Pro Gly Thr Ser His Phe Glu His Leu Cys Ser Tyr Leu Ser Leu 1630 1540 1550

1632 Pro Ash Ash Leu The Cys Leu Phe Gln Glu Ash Ser Glu The Met Ash

 RAW SEQUENCE LISTING
 DAIL: 12/07/2000

 PATENT APPLICATION:
 US/09/724,126
 TIME: 07:57:43

Imput Set : A:\35966aseq.txt

Output Set: N:\CRF3\12072000\1724126.raw

```
1633
                      1555
                                                  1560
       1655 Ser Leu Ile Clu Ser Erp Cys Arg Ash Ser Glu Val Lys Arg Tyr Leu
       1636 1570 1573 1580
1639 GF GLV Glu Arg Asp Ala ile Arg Tyr Pro Arg Glv Ser Asn Lys ieu

E--> 1639 585 1590 1595 1600

1641 Lac Asn Leu Pro Clu Asp Tyr Ser Ser Leu Ile Asn Gln Aia Ser Asn
1542 1605 1610 1615
       1642 Phe Ser Cys Pro Lys Ser Gly Cly Asp Lys Ser Arg Ala Pro Ihr Leu 1645 1620 1620 1630
       1547 Cys Leu Val Cys Gly Ser Leu Leu Cys Ser Gla Ser Tyr Cys Cys Glu 1648 $1635$ $1640$ $1645
       1850 The Glu Leu Glu Gly Glu Asp Val Gly Ala Cys The Ala His The Tyr
1651 - 1650 - 1655 - 1660
1653 Cys Gly Ser Gly Val Gly Tie Phe Leu Arg Val Arg Clu Cys Gin
E--> 1655 665 1670 1675 1680
1657 Val Leu Phe Leu Ala Gly Lys Thr Lys Gly Cys Phe Fyr Ser Pro Pro
1657 1685 1690 1695
       1659 Tyr Leu Asp Asp Tyr Gly Glu Thr Asp Gln Gly Leu Arg Arg Gly Ash 1660 1700 1700 1705
       1662 Pro Leu His Leu Cys Lys Glu Arg Phe Lys Lys Tie Gln Lys Leu Irp
1663 1715 1720 1725
1665 His Gln His Ser Val Thr Glu Glu He Gly His Ala Gln Glu Ala Asn
1666 1730 1735 1740
1668 Gln Hir Leu Val Gly He Asp Trp Gln His Leu
E--> 1666 745 1750 1755
2154 2210> SEQ ID NO: 6
       2155 <211> LENGTH: 1755
       2156 <212> TYPE: PRT
       2157 < 213 > ORGANISM: Mouse
       2159 :400> SEQUENCE: 6
      2160 Met Ala Ser Glu Met Glu Pro Glu Vat Gin Ala 11e Asp Arg Scr fen
2161 1 5 1.0 1.5
      2163 Leu Glu Cys Ser Ala Glu Glu Ile Ala Giy Arg Trp Leu Gln Ala Thr 2164 $20$ $20$ $25$
      2166 Asp Leu Asn Arg Glu Val Tyr Gln His Leu Ala His Cys Val Pro Lys 2167 35 40 45
      2169 The Tyr Cys Arg Gly Pro Asn Pro Phe Pro Gln Lys Glu Asp Thr Leu 2170 -50 -55 -60
      \pm 172 Ala Gln His Ile Leu Leu Gly Pro Met Glu Irp Tyr Ile Cys Ala Glu 2173 -65 -70 -75 -80
      2175 Asp Pro Ala Leu Gly Phe Pro Lys Leu Glu Gln Ala Asn Lys Pro Ser 2176 90\, 95 .
      2178 His Leu Cys Gly Arg Val Phe Lys Val Gly Glu Pro Thr Tyr Ser Cys 2179 $100\ ] 105\ ] 105 $110\ ]
      2181 Arg Asp Cys Ala Val Asp Pro Thr Cys Val Leu Cys Met Glu Cys Phe
      2182 115 120 125
      2184 Len Gly Ser fle His Arg Asp His Arg Tyr Arg Het Thr fhr Ser Gly 2185 -130 -135 -140
                                                                       140
```

2187 Gly Gly Gly Phe Cys Asp Cys Gly Asp Thr Glu Ala frp Lys Glu Gl;

 RAW SEQUENCE LISTING
 D.11E: 12/07/2000

 PAFENT APPLICATION:
 US/09/724,126
 TIMD: 07:57:43

Taput Set : A:\35966aseq.txt
Output Set: N:\CRF3\12072000\1724126.raw

0.0.0.0																
2188			_			150		_	_		155					160
	Pro	Tyr	Cys	Gln			L.ys	Leu	ser			Gin	Val.	Val		GLu
2191					1.65					170					1"5	
2193	Glu	Asp	Pro			His	Leu	Ser		Asp	Val	ile	Ala		1hr	171
2194				180					185					190		
2196	ASI	.1 l.e		Ala	He	Met	Phe		Tyr	Ala	Val	Asp	110	LOU	lhr	$1  \mathrm{rp}$
2197			195					200					205			
2199	Clu	Lys	Glu	Ser	Glu	Leu	Pro	Glu	Asp	Len	GLu	Val	Ala	Glu	Lys	Ser
2200		210					215					220				
3202	Asp	Thr	Tyr	Tyr	Cys	Met	Leu	Phe	Asn	Asp	Glu	Val.	His	Thr	Tyr	GLu
2203	225					230					235					240
2205	Gln	Val	Hle	Tyr	Thr	Leu	Gln	Lys	Ala	Val.	Asn	CVS	Thr	Gln	Lvs	Glu
2206					245					250					255	
2208	Alla	He	Gly	Phe	Ala	Thr	Thr	Val	Asp	Arg	Asp	Gly	Arq	Arq	Pro	Va L
2209			_	260					265			•		270		
2211	Arq	Tyr	GIV	Asp	Phe	Gln	Tvr	Cys	Asp	Gln	Ala	Lvs	Thr	Val	He	Val
2212		-	275	•			•	280	•			•	285			
2214	Arg	Asn	Inr	Ser	Arq	Gin	Thr	L/S	Pro	Leu	Lys	Vá l		Val	мет	His
2215	•	290			-		295	2				300			••••	
2217	Ser	Ser	Val	Ala	Ala	His	Gin	Asn	Phe	Giv	Ten		Ala	Len	Ser	Erro
221.8	305					310					315	-,		2.,,	171.2	320
2220		617	Ser	Val	110		Tyr	Ser	Asp	Gly		Ara	Ara	Ha	Len	
2221					325	****	-7.	.,.,		330		21	111.9	***	335	0112
2223	Gln	Val	Gly	Len		GTu	G12	Pro	Asn		Gin	Acn	Sar	Sar		Val
2224				340		01.4			345	(31)	13 L. U	:1511	51.1	350	L. C	, u 1.
2226	hen	Aro	Leu		Len	Agn	Aen	Sar		Lan	Ten	Lve	alv		7. 11/1	2150
2227			355				5	360		2011	11.5	1-3 0	365	27.1 Cc	741.9	.,
2229	Val	TVT		Gla	Len	Pho	Met		Sar	140	Tano	Mar		F 13	1	100.00
2230		370		0111	i.cu	L 11.C	375	JCL	.7(3.1	124.41	1.00	380	wah	IJ-12 CI	د رند	131
2232	1 ./ e		f 4411	Dha	Δla	1 411		Uha	Ala	1110	Agn		3 220	Ole	1 000	Clo
2233	385	Lyo	124,41	1 1	riiu	390	arg	FILE	r.Iu	1.73	395	111	13.1 il	0111	Lea	400
2235		Acn	Pho	Mot	Glo		Aen	Hite	clu	7, ma		V 1	Sar	Wall	The	
2236	,	1120		110.1.	105	мэр	пар	111.5	G.Cu	410	MIG	V CI 2.	OC. 1	V (1 ).	415	21.1 G
2238	Lan	Sar	Wai	Cln		Dha	The	Ala	Dre		T OU	A 1 =	2 10/2	Link		7 011
2239	Lea	SCI		420	r-ne	rite	1111	MIG	425	1111	r.e.u	P.I.O.	r.r.d	430	Le:u	Leu
2241	The	Clu			Lon	Mot	Thr	Ma I		Tlo	T	7 7 7	nha			***
2242	t Ita.	GIU	135	WPII	Lea	PICE C	1.111	440	TIE	.€ 1.€	1,/8	Ald		MEST.	Asp	HAS
	Lau	F 11.0		1	2.00	2.1.5				ry Is as	/11 s	**1	445		·	
2244 2245	Len	450	nis	Arg	ASP	Ald	455	61 Y	Arg	Phe	GLI		Gru	arg	$1 \not \subseteq \Sigma$	1 n.c
	7 1 -		21.1 ···	* 1 -	<b>53.</b> +	1				••••		460				_
2247		Leu	G I.II	Ala	Pne		Pne	Arg	Arg	vai		ser	i.eu	116	Leu	
	465		***		-	470	_				475	_				480
2250	Leu	ı.ys	1 Å T.	va1		116	ser	Lys	Pro		GLu	rp	ser	Asp		Leu.
2251					485			\		490					495	
2253	Arg	GIN	LYS		Leu	GIn	GLY	Phe		Ala	Phe	Leu	GLu		Leu	Lys
2254				500					505					51.0		
2256	Cys	Het.		GLY	меt	Asp	Pro		Thr	Arg	Gln	Val		Gln	His	Tle
2257			515					520					525			
2259	GIU	Het	Glu	P.ro	GLu	Irp	Glu	Ala	Ala	Phe	Thr	Leu	GIn	Met	Lys	ren
2260		530					535					540				

 RAW SEQUENCE LISTING
 DATE: 12/07/2000

 PATENT APPLICATION:
 US/09/724,126
 FIME: 07:57:43

Input Set : A:\35966aseq.txt
Output Set: N:\CRF3\12072000\1724126.raw

2262 2263		His	Va l.	Tle	ser	Met 550	Vāl	Gln	Asp	Trp	Cys 555	A.l a	Leu	Asp	Glu	Lys 560
2265 2266	Va l.	Leu	11e	€ l u	Ala 565	гуг	1.78	Lys	Cys	Leu 570	Ala	Val	Leu	Thr	Gln 575	C∵s
2268 2259	His	Gly	Giy	Phe 580	1 h.r	Asp	Gly	Glu	Gln 585	Pro	Ile	lhr	Leu	Ser 590	110	Cys
1271 2272	Gly	i! i.s	se.r 595	Val	GIu	thr	He	arq 500	lyr	Cys	Val	ser	Gla 605	Glu	Lys	Val
2274 2275	ser	11e 610	His	Leu	Pro	1.10	ser 615	Arg	Leu	Leu	Ala	Gly 620	Leu	His	va l.	i.eu
2277 2278		Ser	Lys	Ser	Glu	Val 630	Ala	Tyr	Lys	Phe	Pro 635	Glu	Leu	Leu	Pro	Leu 640
2280 2281					645					650				-	655	
2283 2284	Val	Leu	Cys	Ala 660	Gln	Val	His	Ala	Gly 665	Het.	Trp	Arg	Arg	Asn 670	Gly	Phe
$\frac{2285}{2287}$	Ser	Leu	Val 575	Asn	Gln	He	Tyr	Tyr 680	Tyr	His	Asn	Val	Lys 685	Cys	Arg	Arg
2289 2290	Glu	Met. 690	Phe	Asp	Lys	Asp	Ile 695	Val	Met.	Leu	Gin	Thr 700	Gly	Va l	ser	Het.
2292 2293		Asp	Pro	Asn	His	-10	Leu	Net	T l.e	Met	Leu 715	Ser	Arg	Phe	G1 u	Leu 720
2295 2296	Tŗr	GIn	Leu	Phe	Ser 725	Thr	Pro	Asp	Tyr	Gly 730	Lys	Arg	Phe	Ser	Ser 735	G.I u
2298 2299	Va l	Thr	His	Lys 740	Asp	Va I.	Val	Gln	G l.n 745	Asn	Asn	Thr	Leu	Tle 750	G.l u	G Lu
2301 2302	Met	I.eu	Tyr 755	Leu	rle	Tie	Иet	Leu 760	Val	Gly	Glu	Arg	Phe 765	Asn	Pro	Gly
2304 2305	Val	G17 770	GIn	Vál	Ala	Ala	Thr 775	Asp	Glu	He	Lys	Arg 780	Glu	He	Tle	His
2307 2308	G Ln 785	Leu	Ser	Tle	Lys	Pro 790	Met.	Ala	His	Ser	G1u 795	Leu	Val	Lys	ser	Lou 800
2310 2311	Pro	GLu	Asp	GLu	Asn 805	Lys	Glu	Thr	Gly	Met 810	Glu	Ser	Val	He	G19 815	ser
2313 2314				820				_	825		=	-	_	830	•	
2316 2317			835					840					845			
2319 2320	ser	Arg 850	Ala	Glu	G.l n	Ser	Lys 855	Ala	Glu	Glu	Ala	Gln 860	Arg	Lys	Len	Lys
2322 2323	865			-		870					875					880.
2325 2326					885					890					895	
2328 2329				900					905					910		
2331 2332			915					920					925			
2334	Gly	мет	Ala	Leu	Gln	Glu	Glu	T.78	His	${\tt His}$	Leu	Glu	Asn	Al.a	Val.	Glu

**RAW SEQUENCE LISTING**PAFENT APPLICATION: US/09/724,126

DATE: 12/07/2000
TIME: 07:57::3

Input Set : A:\\]5966aseq.txt
output Set: N:\CRF3\\12072000\\1724126.raw

```
930
                                        935
      2337 Gly His Val Gln Thr Pho Thr Pho Thr Gln Lys Hic Ser Lys Pro Gly 2338 945 950 956 956
      2340 Asp Ala Pro His Ash Ser Pro Ser Tle Leu Ala Met Leu Clu Thr Leu
      2341 965 970 975
      2343 Gin Asn Ala Pro Ser Leu Giu Ala Bis Lys Asp Met 11e Arg 1rp Leu
      2314 980 985 990
      2746 Leu Lys Her Phe Asn Ala Tle Lys Lys Tle Ard Glu Cys Ser Ser Ser
2347 995 1006 1005
      2349 Ser Pro Val Ala Glu Ala Glu Gly Thr Tle Met Gin Glu Ser Ser Arg
2350 1010 1015 1020
2352 Asn Lvs Asp Lys Ala Glu Arg Lys Arg Lys Ala Glu 1le Ala Arg Leu
E--> 235 025 1030 1035 1040
2355 Arg Arg Glu Lys Ile Mer Ala Glu Met Ser Glu Met Glu Arg His Phe
2356 1045 1045 1050 1055
      2358 Ile Asp Glu Asa tys Glu Leo Phe Gla Gla Thr Leo Glu Leo Asp Thr
      2359 1060 1065 1070
      2361 Ser Ala Ser Ala Thr Leu Asp Ser Ser Pro Pro Vai Ser Asp Ala Ala 2362 - 1075 - 1080 - 1085
      2364 Leu Thr Ala Leu Gly Pro Ala Gln Fhr Gln Val Pro Glu Pro Arg Gln
      2365 1090 1095 1100
2367 Phe Val Thr Cys Ile Leu Cys Gin Glu Gin Glu Val Thr Val Gly
E--> 236 105 1110 1115 1120
2370 Ser Arg Ala Met Val Leu Ala Ala Phe Val Gin Arg Ser Ihr Val Leu
2371 1125 1130 1135
      2373 Ser Lys Asp Arg Thr Lys Ihr The Ala Asp Pro Glu Lys Tyr Asp Pro 2374 1140 1145 1150
      2376 Leu Phe Met His Pro Asp Leu Ser Cys Gly Thr His Thr Gly Ser Cys
      2377 1155 1160 1165
      2379 Gly His Val Het His Ala His Cys Irp Gln Arg Fyr Phe Asp Ser Val
2380 1170 1175 1130
     2382 GM Ma Lys Glu Glu Arg Arg Glu Glu Arg Leu Arg Leu His Thr Ser
238 185 1190 1195 1200
E--> 238 185 185 1190 1195 2385 127 Asp Val Glu Ash Gly Glu Phe Leu Cys Pro Leu Cys Glu Cys Len 1205 1210 1215
      2388 Ser Asn Thr Val Ile Pro Leu Leu Leu Pro Pro Arg Ser Ile Leu Ser
      2389 1220 1225 1230
      2391 Arg Arg Len Ash Phe Sor Asp Gln Pro Asp Leu Ala Gln Irp Thr Arg
2392 1235 1240 1245
      2394 Ala Val Thr Gla Gla Tie Lys Val Val Gia Met Lou Arg Arg Lys His
2395 1250 1256
2397 Asia Ala Ala Asp Thr Ser Ser Glu Asp Thr Glu Ala Met Asn Tle-
E--> 239 (265) 1270 1275 1280
2400 Tie Pro Ile Pro Glu Gly Phe Arg Pro Asp Phe Tyr Pro Arg Asn Pro
2401 1285 1290 1295
      2403 Tyr Ser Asp Ser Tle Lys Glu Met Leu Thr Thr Pho Gly Thr Ala Ala 2404 $1300$ $1310$
      2406 Tyr Lys Val Giy Leu Lys Val His Pro Asn Glu Gly Asp Pro Arg Val
      2407 1315 1320
```

**RAW SEQUENCE LISTING**PAIENT APPLICATION: US/09/724,126

TIME: 07:57:43

Input Set : A:\35966aseq.txt

Output Set: N:\CRF3\12072000\1724126.raw

2409 Pro Tle Leu Cys Irp Gly Thr Cys ala Tyr Thr Ile Gln Sor Tle Glu 2416 1336 1335 1340 E--> 2413 (345)

1350

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1 2416 1365 1376 1375 1416 Jrp thr Val Ala Leu Leu Pro Val Val Gln Gly His Phe Cys Lys Leu 2419 \$1380\$ 1385 \$1390\$2121 Phe Ala Ser Leu Val Pro Ser Asp Ser Tyr Glu Asp Leu Pro Cys 11e 2122 1395 1400 1405 2424 Lou Asp lle Asp Met Phe His Leu Leu Val Gly Leu Val Lou Ala Phe 2425 1410 1415 1420 2427 Pro Ala Leu Clu Cys Glu Asp Pne Ser Gly Ser Ser Leu Aia Thr Gly 5--> 2428 425 1430 1435 1440 1150 Sp Eeu His 11e Phe His Leu Val Thr Met. Ala His IIe Val Glu Ite ..431 1445 1450 1455 2453 Leu Leu Thr Ser Cys Thr Glu Glu Asn Gly Met Asp Gln Glu Asn Pro 2434 1460 1465 1470 1496 The Gly Glu Glu Glu Len Ala The Len Ser Leu His Lys The Leu His 2437 1475 1480 1485 2439 Cln Tyr Thr Gly Ser Ala Leu Lys Glu Ala Pro Ser Gly Irp His Leu 2440 1490 1495 1500 2442 Arg Ser Val Arg Ala Ala Ile Met Pro Phe Lee Lys Cys Ser Ala E--> 2441 505 1510 1515 1520 1510 1515 2445 and Phe Phe His Tyr Leu Ash Gly Vai Pro Ala Pro Pro Asp Leu Gin 2446 1525 1530 1535 2448 Val Sec Glv The Ser His Phe Glu His Leu Cys Ash Tyr Leu Ser Leu 2449 1540 1540 1545 2151 Pro Thr Asn Lou Lie His Leu Phe Gin Glu Asn Ser Asp Ile Met Asn 2452 1555 1560 1565 2454 Ser Leu Ile Giu Ser Top Cys Gin Ash Ser Giu Val Lys Arg Tyr Leu 2455 1570 1575 1580 2457 3 Gly Glu Arg Gly Ala Lle Ser Tyr Pro Arg Gly Ala Asn Lys Leu E--> 2458 585 1590 1595 1600 2460 The Asp Leu Pro Glu Asp Tyr Ser Ser Leu Tie Asn Gln Ala Ser Asn 2461 1605 1610 1615 2463 Phe Ser Cys Pro Lys Ser Gly Gly Asp Lys Ser Arg Ala Pro 1hr Leu 2161 \$1620\$ \$16302466 C/s Leu Val Cys Gly Ser Leu Leu Cys Ser Gin Ser lyr Cys Cys Gin 2467 \$1635\$ \$1640\$2159 Ala Giu Leu Glu Gly Glu Asp Val Gly Ala Cys Thr Ala His Thr Tyr 2470 1650 1655 1660 2477 Cys Gly Ser Gly Ala Gly 11e Phe Leu Arq Val Arg Glu Cys Gln E--> 2476 665 1670 1675 1680 2415 Val Leu Phe Leu Ala Gly Lys Thr Lys Gly Cys Phe Lyr Ser Pro Pro 2476 1685 1690 1695 2478 f/r Lee Asp Asp Tyr Gly Glu Thr Asp Gln Gly Leu Arg Arg Gly Asn 2479 1700 1705 1710 2481 Pro Leu His Leu Cys Gin Glu Arg Phe Arg Lys Tle Gin Lys Leu Trp

RAW SEQUENCE LISTING

DATE: 12/67/2000

PATERI APPLICATION: US/09/724,126 TIME: 07:57:43

input Set : A:\35966aseq.txt

Output Set: N:\CRF3\12072000\1724126.raw

1.715 1720 1725 2484 Gln Gln His Sor Tle Thr Glu Glu Tle Gly His Ala Gln Glu Ala Ash 2485 -1736 -1735 -17463136 <217> ORGANISM: Homo sapiens 3138 <400> SEQUENCE: 19 3139 Ala Het Gia Giy Asm Met Ala Asp Glu Gia Ala Giy Gly Thr Giu Arg 3140 1 10 3142 Met Glu ilo Ser Ala Glu Leu Pro Glu Ihr Pro Glu Arg Leu Ala Ser 3143 20 25 362145 Trp Trp Asp Gln Gln Val Asp Phe Tyr Thr Aia Phe Leu His His Leu 3146 - 35 - 40 - 45 3148 Ala Gl: Leu Val Pro Glu Tle Tyr Phe Ala Glu Met Asp Pro Asp Leu 3149 50 55 3151 Gin Lys Gln Giu Glu Ser Val Gln Met Ser Ile Phe Thr Pro Leu Gln 3152  $\pm 65$  70 75 803154 Frp Tyr Leu Phe Gly Glu Asp Pro Asp Ile Cys Leu Glu Lys Leu Lys 5155  $-90^{\circ}$ 3157 His Ser Gly Ala Phe Gln Leu Cys Gly Arg Val Pho Lys Ser Gly Glu 3158 100 105 110 3160 fhr Thr 17c Ser Cys Arg Asp Gys Ala 11e Asp Pro Thr Cys Val Leu 3161 \$125\$ \$1202163 Cys Mer Asp Cys Phe Gin Asp Ser Val His Lys Asn His Acq Tyr Lys 3164 130 135 140 3156 Mot His Thr Ser Thr Gly Gly Gly Phe Cys Asp Cys Gly Asp Thr Glu 3167 145 150 150 155 100 3169 Ala Trp Lys Thr G17 Pro Phe Cys Val Ase His G1u Pro G17 Are Ala 3170 \$165\$ \$170\$ \$1753172 Gly Thr The Lys Glu Asn Ser Arg Cys Pro Leu Asn Glu Glu Val fle 3173 \$180\$ 180 185 3175 Val Gin Ala Arg fys Tle Phe Pro Ser Val Tle fys Tyr Val Val Glu 3176 \$195\$ \$195\$ \$200\$ \$2053178 Met Thr Ile Trp Glu Glu Glu Lys Glu Leu Pro Pro Glu Leu Glu Ile 3179 210 215 220 3181 Arg GD. Lys Asn Glu Arg Tyr Tyr Cys Vel Leu Phe Asn Asp Glu His 3102 225 230 235 240 3.84 His Ser Tyr Asp His Val The Tyr Ser Leu Glm Arg Ala Leu Asp C.s 3185 245 250 2553187 Glu Len Ala Glu Ala Gln Leu His Thr Thr Ala 11e Asp Lys Clu Gly 3188 260 265 276 3190 Arg Arg Ala Val Lys Ala Gly Ala Tyr Ala Ala Cys Gln Glo Ala Lys 3191 275 280 3193 Glu Asp ile tys Ser His Ser Glu Ash Val Ser Gln His  $\nu$ ro Leu His 3194 290 295 300 3.196 Val Glu Val Leu His Ser Glu The Met Ala His Gln Lys Phe Ala Leu

 RAW SEQUENCE LISTING
 DA1E: 12/07/2600

 PATENT APPLICATION: US/09/724,126
 TIME: 07:57:43

Input Set : A:\35966aseq.txt
Output Set: N:\CRF3\12072000\1724126.raw

3197	305					310					315					2.10
3199		Lau	210		Tesa		3.00	Torra	130	Mode		T	Consta	C	A	320
3200	ni 9	ie.u	61.5	SCI	325	PIC: L	4211	1.7.5	116	330		17.1	501	361	_	
	1	034	130	nta		C11	A 3 -	Ciro	1.00			(2)	0.50	4.22	335	
3203	HT 9	G l.tı	1, 1, 61	340	173.2	G.I II	ALC	CS	345	-	G i. c	Giu	910		261	G 1. U
	A com	Desc	con		11.5	Can	2 200	1 000			Ten	A	×1	350		4
3205 3206	4511	PIC	355	LOU	1 745	Ser	wi.d	360	Met	Leu	rrb	ASP		Lys	Lou	ıyr
	T	01		2 0000	,	110	1.00		61	Y	1:1 6	124	365	0	n. 2	tale .
3208 3209	18	370	Ala	arg	1.75	116	375	nts	G I.U	Leu	.116			Ser	NUG	Phe
	Hoi		Mot	0.00	1	1		Lan	tuka	11.	1104	380		1/5.1		
3211 3212	385	G 1. 0	MC C	C L (i	LYI	390	ΓÄĐ	Lut	rite	Alu	395	13.1.1	i, li6	V d.i.	Lys	
3214		1	c. i	tou	/*3 v.		210	7	77.5	Can		4		3		400
3215	1.7.1	1/5	(1 ± 11	17.6:(1	405	1195	GLU	1 7 1	1 1.0	4.10		ASP	HIS	ASD		Ser
	TIO	cor	TLO	The		Lou	Car	17 - 1	72.1 A			The	Vo.1	E	4.15	
3217 3218	110	501	.1 1. C	420	Ald	r.eu	ser	Val	425	Mec	ene	inr	LEV		unr	Leu
	A 1 ··	5	115 0		TLA	C1	210	015		17.01	27.5		141	430	. 1	21
3220 3221	ru a	hig	435	n.eu	1 Le:	13 1 11	GJ.U	440	ASII	Aut	11.6	ser		116	inr	GLU
	T1.2	Con		e to	3/5/1	100	0.00		"…	1.00	A 010	1	445	8 . n . n	1	ni
3224	1111	Leu 450	Tean	OTU	ACLT	Leu	455	GIG	1 Å T.	Leu	Asp	460	ASII	ASD	Lys	Pue
3226	5 m		clo	010	Trans	Sec.		A a c	f v c	Lou	C1		120.3	T	. 1	3.6 (2.1)
3227	465	PHE	GIH	GIV	TÀT	470	(51.11	ASP	Lys	Leu	475	Arq	val	TYE	Ala	
3229		Cys		7.00	ſ.,,a		110	7 2	71.5	C = 11		D	÷ 1		<b>.</b>	430
3230	1 1.0	C) S	аар	Light	485	1 7 1	116	Leu	116	490	Lis	PIO	1111	110		Inr
3232	C1 a	A +151	Lou	Area		Cla	nho	1	. 1 1 11		Dho	A =====	0	ry b. s	495	F
3233	G 1.14	. ri1 9	Leu	500	MO I	OIH	rne	ren	505	017.	Phe	urg	Set		Leu	Lys
3235	Tlo	Loui	Ph.r.		Lifeste	Cl n	Clar	H.st.		clu	73.0	A ===	7	510	57 6 9	
3236	1 1.47	7.65 (1	515	Cys	Piert.	GLII	GTŽ	520	OTU	GLU	ire	Arg	525	G.LII	val	GTŽ
3238	Cla	uic		Clu	1/ 1	Sen	Dra		Ten	C10	2.15	115		110	+ 1	01 -
3239	G I.H	530		(1 1 11	101	ma <sub>E</sub> ,	535	Мар	тъ	G Lu	MIG	540	116	ura	116	(7.1.1)
	Mest	Gin	1 2011	100	Aun	Tla		Lan	Mat	Dha	cin		Trn	Circ	115	(311.0
3242	545	(17.11	1,6:11	m.y.3	25.11	550	reu	reu	ne t.	Ping	555	GIU	TT.	CYS	MIU	560
3244		Glu	cla	Lou	Lou		Val	Λla	Tur	Lve		Cve	uic	137.3	A 1 -s	
3245	rtz-p	(1.2.1)	0111	Licu	565	Leu	V (2 1,	7. I. a	1 / 1	570	Gru	CIS	nis	Ly S	575	V (I I
3247	ыот	Ara	Cire	Sar		Sor	Dho	rla	Sar		car	Luc	Thin	Val		Cln
3248	ric c	111.9	0,5	580	1111	JUL	t 11t.	110	585	Ser	261	Lys	1111	590	val	(7111
3250	Ser	Cve	alv		Sur	Lon	c.to	Thr		Sar	Tur	3 ra	Val		ch	ē c n
3251	.,,,,	0,10	595	11.2.5	361	LCu	O.I u	600	my a	J-1.	1 / 1	ni 9	605	D SAL	GIU	MSP
3253	Lon	Val		110	nie	1 20	Pro		Sar	Ara	The	Losu		/·1·	Lou	11 1 11
3254		610	., C. L	-10	11 4. 57	221. 11	615	11, 11	UCL	ra d	1111	620	MIU	0.7.7	Len	nis
3256	Val	Arg	Lon.	Sor	ă ra	Len		Δla	Val	Sar	Arm		uic	C1 0	pha	Wal
3257	625		22.00	.,	4	630	OLY	21.1.0	vu.	JOL	635	Leu	11 7 13	U.I u	1.1165	640
3259		Tehes	Glu	200	Ohe		val	Clu	Val	Lan		e15	Tree	Dro	Lan	
3260	.,		J.J. (1		645		7 GI.	J 1. u	·ui.	650	1 U.L	Q.I.U	* 7 ±	rito	655	mr 9
3262	Cvs	1.541	Val	1.(21)		Ala	Gln	V.a.1	Val		Glo	Mat	Trn	Amer		Aan
3263	220			660			.,	,	665		· · · ·	•3C: (,	1 3.1,	670	er i i	asu
3265	GIV	Len	Ser		Tle	Ser	Gla	Val		T17 Y1	Tur	Gln	Aen		Live	Circ
3266			675			.,	J	680	. 110,	* I *	* ./ E	OLH	685	+ (1 L	1175	C13
3268	Ara	Glo		Met	Tyr	Aso	Lvs		Tle	Tle	Mot	Len		Tla	G 1 ·z	ala
3269		690			. 4		695					700	3411		.,,,	

 RAW SEQUENCE LISTING
 DA1E: 12/07/2000

 PATENT APPLICATION: US/09/724,126
 DA1E: 07:57:44

Input Set : A:\35966aseq.txt
ontput Set: N:\CRF3\12072000\1724126.raw

3271	Ser	Leu	Net	Asp	Pro	Asn	Lys	Phe	Leu	Leu	l.eu	Val	Leu	Gln	Arq	Tyr
3272						730					715					726
3274	G.l u	Leu	Ala	G]u			Asn	Lys	Thr		ser	Thr	L∵s	Asp		Asp
3275		T 1			725		10.1		73	730	a2				735	
3277 3278	rea	110	Lys	740	17/1	ASII	Inr	Len	745	to Lil	Gru	Hert.	Leu	51n 750	vai	neu
3280	Пр	1.79	دي ا		619	G La	Arm	ter		pro	G3 -7	va 1	:21 **		Val	rhe
3281	3 C.	. ,	755	• 1.2.2.	,	0.4		760	, 4,		.,,,	٠	755	7,577	V G 1.	111.1.
3283	Lys	Glu	Glu	Val	Thr	Met	Arq	Glu	ile	ile	Hi.s	l.eu	Leu	Cvs	116	GLu
3284		770					775					780		-		
3286		Met	Pro	His	Ser		He	Ala	Lys	Asn	Leu	Pro	Gl u	Asn	G±u	Asn
3287		_				790					795					800
3289	Asn	Glu	Thr	GLY		G.l u	Asn	Val.	He		Lys	Val	Ala	Thr		i∵s
3290		D		12 . 1	805	C 1		0.1	171	810	<u> </u>		•		81.5	
3292 3293	Lys	PIO	GI,	820	Ser	GIV	HIS	(3±2)	925	түг	GIU	Leu	Lys	830	ULil	Ser
3295	Lon	1.78	Asp		Asn	Met	7 ***	Pho		His	Tyr	Sar	Lve		ala	Ric
3296			835					840	- ; -		1.11	.,,,,	845		CIII	11.1.3
3298	ser	Lys	Ala	Glu	His	Met.	Gln	Lys	Lys	Arg	Arg	Lvs	Gln	Glu	Asn	LVS
3299		850					855					860				
3301		Glu	Ala	Leu	5 LO		Pro	Pro	Pro	Pro	Glu	Phe	Cys	Pro	Ala	Phe
3302						870					875					280
3304	Ser	Lys	Va J.	He		Leu	Leu	Asu	Cys		Lie	Met	иет	Гуr		Leu
3305		<b>-1</b> -		6. 1	835		- 1		_	860					895	
3307 3308	Arq	тил	va.i.	900	G I, U	Arg	ита	TT6	4SP	inr	Asp	ser	ASII		rp	Thr
3310	Glu	Gly	Met		Cin	Met	& La	Pha		Tio	Len	Δla	Lan	910	Loui	Em
33.11	G 1. (4	.,,	915		3111	ric c	23.1.61	920	11.1.5	11.0	r.e.u	25.1.62	925	Ory	ren	IJC/II
3313	Glu	Glu		Gln	Gln	Leu	Glu		Ala	Pro	Glu	Glu		Val	Thir	Phe
3314		930					935					940				
3316	Asp	Phe	$T \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \!$	His	Lys	Ala	Ser	Arg	Leu	GLY	Ser	Ser	Aia	Met.	Asn	lie
3317						950					955					960
3319	G l.n	Иet	Leu	Leu		i.ys	Leu	Lys	Gly		Pro	Gln	l.eu	Glu	-	Gln
3320		3.00	110.0	W 11 .s.	965	T			en 3	970	m 1		~ l		975	
3322 3323	Lys	asp	Mer.	980	THE	rrp	116	Leu	935	мес	Phe	ASP	inr	990	Lys	urg
3325	[en	Ara	Glu		Ser	Cvs	برج آ	Tla		2.1 a	Thr	The	Sar		Sor	Cin
3326	2000	****	995	! .,		015		1000	V 52 L	71 L.G	1111		1005	0.1.	.16.1	1) [11
3328	ser	Lle	Lys	Asn	Asp	Glu			His	Asp	L78			Ala	Glu	Arq
3329	.1	010				1	.6.15				3	1020				
3331			Lys	Ala			Ala	Arg	Leu	His	Arg	Gln	Lys	11.e	Her	Ala
3332						1030					035					.040
3334	GIn	Met	Ser			Glu	Lys	Asn			Glu	lhr	His			Met
3335	Tur	A 0.5	X ere		.045	e2 1 cc		D × c		1050	C1.:	7			.050	
3337 3338	1 7 1	rsp		060	ser	G.I II	мес		.065	Lys	GIU	Asp		11.e .070	Het	CLU
3340	Glu	Glu			019	A La	Val			rur	Ser	Ara			Lon	chy.
3341.			075					080		- / -			085	11.E G		
3 3 4 3	Pro	Lys	Arg	Gly	Pro	Ser			Glu	Lys	Glu			Thr	Cvs	Tle
										-					-	

 RAW SEQUENCE LISTING
 DAIE: 12/07/2000

 PATENT APPLICATION: US/09/724,126
 TIME: 07:57:14

Input Set : A:\35966aseq.txt
Output Set: N:\CRF3\12072000\1724126.raw

3344	1090		1095		1100	
				al Lys Ile		Ala Met Val
	1.105		1110		1115	1120
		Ala Cys Val	Gln Lys S	er the Ala	Leu Thr Glo	His Ary Gly
3350		1125		1130		1135
3352	Lys Pro					Pho Mot Asp
3353	-	1140	•	1145		1150
3355	Pro Asp	Leu Ala Tvr	Gly Thr 1	ur Thr Gly	Ser Cys Gly	His Val Met
3356	• 1	1155	1.1	.60	1.165	
3358	His Ala	Val Cys Irp	Cln Lys I	yr Phe Glu		Leu Ser Ser
3359	1170		1173		1130	
3361	Gln Gln	Ard lle His	Val Asp f.	eu Phe Asp	Lea Gla Ser	Gly Glu Tyr
3362	1185		1190		1195	1000
3364	Leu Cys	Pro Leu Cys	Lys Ser L	eu Cys Ash	Thr Val Tie	Pro Tie lie
3365		1205		1210		1215
	Pro Leu	Gln Pro Gln	Lvs Tle A	sn Ser Glu	Asn Ala Asp	Ala Leu Ala
3368		1220		1225		1230
						Ala Arg ile
3371		1235	12	40	1245	
				la Lys Glv		lle Pro lle
3374			1255		1260	
33/6	Phe Phe	Ash Gir Gir	Met Gly A	sp Ser Thr		His Ser He
	1265		1270		1275	1380
3380	Leu Ser	Phe Gly Val	om ser s			Ser He Lys
	Classics.	1283 Val Tle Leu		1290		1.295
3383	Gin Met.	1300		1305		Gay Leu Lys 1310
	Val Pro	Pro Asp Glu				
3386	1 4 4 1 2 5	1315	13.		1325	int tip ser
		Ala Phe Thr				Gly zen Glu
			1335	au rati dau	1340	ory Map Gin
3391	Gly Lys	Pro Leu Phe	GLV Ala L	eu Glu Asn	Arg Glo His	Asn Gly Len
3392					1355	1360
3394	Lys Ala	Leu Met Gin	Phe Ala Va	al Ala Gin	Arg lie Thr	Cys Pro Gin
3395		1.365		1370		1375
3397	Val Leu	Ite Gin Lys	Bis Leu Va	al Arg Leu	Leu Ser Val	Val Leu Pro
3398		1380		1585		1390
3400	Asn fle	Lys Ser Gau	Asp Thr Pa	to Cys Lea	Leu Ser Ile	Asp Leu Phe
3461	1	.395	116	0.0	1405	
3403	His Val	Leu Val Ciy	Ala Val Lo	eu Ala Phe	Pro Ser Leu	Tyr Trp Asp
3404	1410		1415		1420	
3406	Asp Pro	Val Asp Lau	Gin Pro Se			Tyr Ash His:
3407	1425	1	L430	1	435	1440
3409	Leu Tyr	Leu Phe His			His Met. Leu	Gln The Leu
3410		1445		1450		
	Leu Thr	Val Asp Thr	Gly Leu Pr			
3413	2121	1160		1465		.470
		Ala His Sec				Ser Gin Tyr
3416		475	148	30	1485	

 RAW SEQUENCE LISTING
 DAIE: 12/07/26/00

 PATENT APPLICATION: US/09/724,126
 FIME: 07:57:14

Input Set : A:\35966aseq.txt
Output Set: N:\CRF3\12072000\1724126.raw

3410 Thr Ser Gly Ser the Gly Dys Asp The Pro Gly Trp Tyr Lou Trp Val 1419 1490 1495 1500 1421 Ser Leu Lys Ash Gly lie Thr Pro Tyr Leu Ard Cos Ala Ala Leu Phe 7432 1505 1510 1515 1520 3424 Phe His lyr Leu Leu Gly Val Thr Pro Pro Glu Glu Leu His thr Asm 3125 1525 1530 1533 4437 Ser Ala Stu Gl/ Sim Pul Ser alm Lem Cys Ser Dyr Lem Ser Lem Pio :429 1540 1545 1550 3430 Thr Ash Leu Phe Lou Leu Phe Gin Glu Tyr Trp Asp thr Val Arg Pro -430 Leu Leu Gin Arg Arq Cvs Aia Asp Pro Aia Leu Leu Asn Cys Leu Lvs 1434 1570 1580 3435 Gla Lys Asa far Val Val And Tyr Pro And Lys And Asa Ser Lea the 3437 1585 1580 1590 1595 1600 3439 Glo Leu Pro Asp Asp Tyr Ser Cys Leu Leu Asn Glo Ata Ser His Phe 3440 1605 1610 1615  $^{3442}$  Arg Cys Pro Arg Ser Ala Asp Asp Glu Arg Lys His Pro Val Len Cys  $^{3445}$  -  $^{1620}$  -  $^{1625}$  -  $^{1630}$ 5445 Jeu Phe Cvs Gly Ala Tie Leu Cys Ser Gli Asi Ile Cvs Cvs Gli Glu 5446 \$1635\$ \$1640\$3448 fle Val Ash Gly Glu Glu Val Gly Ala Cys The Phe His Ala Leu His 3449 1650 1655 1660 3451 Cvs Lys Ala Arg Gly Cys Ala Tyr Pro Ala Pro Tyr Leu Asp Glu Tyr 3452 1665 1670 1675 3454 Giv Glu Thr Asp Pro Glv Leu Lys Arg Glv Ash Pro Leu His Leu Ser 3455 1695 1695 7457 Arg Glu Arg Tyr Arg Tys Leu Bis Leu Vol Trp Glu Gin His Cys 11e 3458 1700 1705 1710 3450 Tie Glu Glu Tle Ala Arg Sor Gln Glu Thr Asn Gln Met Leu Phe Gly 4464 1735 1720 1725 E--> 3463 Phe Asn Trp Gln Leu Leu E--> 3464 1730

do not count ending stop codon

suret page formor enon.

## VERIFICATION SUMMARY DATENT APPLICATION: US/09/724,126 DIME: 07:50:48

input Set : A:\\35966aseq.txt
cumput Set: N:\CRF3\\12072000\\1724126.raw

<210> 18 <211> 5205 <212> DNA

<213> Homo sapiens

<400> 18

See kforyycyndh i Jen 10 gcccagttgc a fram Meet

(only the enough portion)